COMMANDER'S GUIDE TO ENVIRONMENTAL MANAGEMENT

■ MARCH 1998 ■

About this Guide

The Commander's Guide to Environmental Management is designed to meet the environmental information needs of Army commanders. It also is a useful tool for staff officers and other personnel. This "primer" on environmental programs offers only basic information about environmental matters, but it will better enable commanders to work with their environmental personnel to develop and maintain an effective environmental program. Although this Guide is geared toward active Army installations and activities in the continental United States and its territories, commanders and personnel outside the continental United States (OCONUS), and at Civil Works activities under the jurisdiction of the U.S. Army Corps of Engineers, may find the information useful.

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What Is Environmental Management and Why Is it Important?

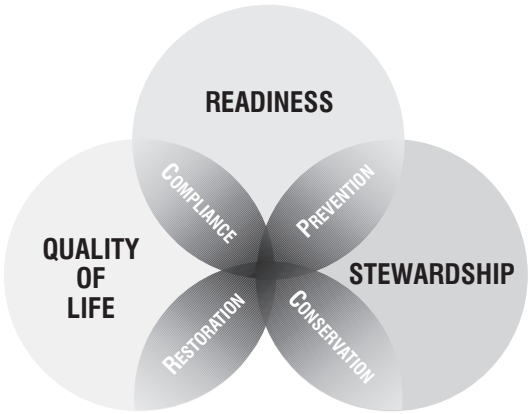
Your command extends across every aspect of the mission, but the environment impacts virtually all Army actions and operations. Whether you command a line unit on the "Frontier of Freedom," produce equipment for front line soldiers or maintain facilities and land, environmental responsibilities are an important part of your command.

The Army must conserve, protect, and restore natural and cultural resources while accomplishing the military mission. It manages more than 12 million acres, including land and facilities that may be scrutinized by the public, regulators, Congress or the courts. The Army needs a lot of that acreage to conduct training and other mission activities. Proper environmental management and coordination at the installation are not only necessary for complying with federal, state, local and host nation regulations, they benefit the mission by keeping operations on schedule and maintaining good public relations.

As an Army commander, you provide the leadership that can transform the Army's environmental vision statement into a functioning ethic.

> *"Integrate environmental values into the Army mission in order to sustain readiness, improve the soldier's quality of life, strengthen community relationships and provide sound stewardship of resources."*

The Army's strategy to accomplish its vision is deeply rooted in our shared national values.



People, resources, communication and organization — united by the Army's tradition of leadership — are the bedrock of Army environmental management. By focusing on four main areas — compliance, conservation, pollution prevention and restoration — the Army environmental program helps sustain readiness, protect resources and improve quality of life.

You Should Know

Your installation's environmental program should cover five main elements:

Environmental Compliance

Make sure your installation's operations meet federal, state, local and applicable host-nation environmental requirements. These requirements include laws and regulations on wastewater discharge, noise abatement, air quality, and solid and hazardous materials and waste management.

Conservation Management

Focus on the long-term sustainable use, ecological management, conservation and restoration of the land and renewable natural resources such as vegetation, habitat, fish and wildlife, endangered species and wetlands. It also addresses historic, archeological and other cultural resources.

Environmental Considerations and Documentation

This includes consideration — from planning through execution — of possible environmental impacts of operations and activities. The National Environmental Policy Act (NEPA) and AR 200-2 require documentation of these considerations and development of methods to avoid or reduce adverse environmental effects.

Environmental Restoration

Focus on cleaning up contamination caused by past waste disposal practices. Restoration includes the Installation Restoration Program (IRP), the Formerly Used Defense Sites (FUDS) and the Base Realignment and Closure (BRAC) programs. The IRP remediates hazardous waste at active Army installations. The FUDS program remediates waste at formerly used defense sites. The BRAC program remediates hazardous waste at closing installations.

Pollution Prevention

Installations can cut costs, waste and pollution through source reduction, recycling, and resource conservation. This includes reducing both hazardous materials use and generation of hazardous waste. Your installation can prevent pollution by using fewer toxic materials and conducting more environmentally acceptable operations, increasing efficiency, and preventing accidents that damage the environment.

Many times, these program elements will overlap and interact. Environmental management is a cooperative effort that calls for proper planning, training, adequate staffing and resources. The key to successful environmental management is working with your staff to promote the environment as everyone's responsibility. Coordination and cooperation with other government and private agencies can often make this easier.

Remember . . .

- Accomplishing the mission remains the top priority. However, successfully blending the military mission with environmental stewardship is Army policy.
- The command emphasis you place on your environmental program determines its success.
- Your best tool for achieving and maintaining compliance is an environmental management team developed from your installation staff.
- Preventing pollution — reducing hazardous materials, recycling and conserving resources — is the key to compliance.
- As commander, you are ultimately responsible for compliance with all applicable environmental laws and regulations within your command.
- Proactive involvement in environmental planning for weapon systems that will be deployed or assigned to your installation, can prevent costly surprises.
- The consequences of not complying with environmental laws can be severe — a delay or halt in the mission, negative public image for the Army, even civil or criminal penalties.

What Is the Army's Environmental Management Policy?

The Army's environmental management policy:

- Reduce or eliminate pollution at the source.
- Conserve and protect natural and cultural resources.
- Integrate environmental consideration into all activities
- Conduct installation operations that are environmentally acceptable and enhance soldiers' and civilians' quality of life.
- Comply with all applicable environmental laws.
- Continue to restore previously contaminated sites.
- Allocate resources and training to protect our environment.

Based on Army Regulation 200-1 (21 February 1997) and the Department of the Army Environmental Management Policy Memorandum dated 17 July 1990 (reiterated 5 December 1995).

WHAT ABOUT OCONUS INSTALLATIONS?

Policy for environmental compliance at installations located in foreign nations is found in "Final Governing Standards" developed by Department of Defense-appointed environmental executive agents. These standards compare host-nation environmental criteria to those in the DoD Overseas Environmental Baseline Guidance Document (OEBGD). This comparison includes a review of applicable host-nation laws, base rights or Status of Forces Agreements (SOFAs), international agreements, and current practices. Before issuing the Final Governing Standards, the executive agent presents them to the State Department for review and comment. The OEBGD is applied by DoD components stationed in foreign countries when host nation environmental standards do not exist, do not apply, or provide less protection to human health and the environment than the baseline guidance, except when inconsistent with applicable host-nation laws, base rights, SOFAs or other international agreements.

Environmental governing standards exist for most OCONUS Army locations, including Belgium, Germany, Japan, Korea, Netherlands, and Panama.

The Final Governing Standards and the OEBGD do not provide policy for environmental restoration at installations located in foreign nations. Such policy is provided by a Department of Defense Memorandum (October 18, 1995) under the subject, "Environmental Remediation Policy for DoD Activities Overseas."

MAJOR REGULATORY COMPLIANCE DOCUMENTS SPECIFICALLY ADDRESSING OCONUS ISSUES INCLUDE:

- Department of Defense Directive 4715.1, "Environmental Security."
- Department of Defense Instruction 4715.4, "Pollution Prevention."
- Department of Defense Instruction 4715.5, "Management of Environmental Compliance at Overseas Installations."
- Department of Defense Directive 4715.ll (Draft), "DoD Policy for Analyzing Defense Actions with the Potential for Significant Environmental Impact Outside the United States."
- Department of the Army Regulation 200-1, "Environmental Protection and Enhancement."
- Department of the Army Regulation 200-2, "Environmental Effects of Army Actions."

What Is ...?

Environmental Compliance

Environmental compliance is a measure of an installation's status with respect to the myriad of federal, state, local and host-nation environmental regulations. Compliance status can vary according to the regulation. For example, your installation could be in compliance with water quality regulations, but out of compliance with hazardous waste regulations after missing the deadline for an environmental report.

Total, continuous environmental compliance is an illusive goal. Only a regulatory agency — usually the state and U.S. Environmental Protection Agency (EPA), or the U.S. Fish and Wildlife Service for endangered species — can determine an installation's compliance status. This is normally done through inspections. However, many environmental regulations are "self regulating," requiring you to monitor your program and notify the regulatory agency when you suspect you are not in compliance.

Environmental compliance is a cost of accomplishing the mission. You should plan, budget and pay for your environmental program as an operational expense.

Conservation

Conservation refers to the wise use, improvement and protection of natural and cultural resources, both for support of the military mission and public benefit. It is the basis for natural and cultural resources management.

Installations maintain plans to effectively manage their natural and cultural resources. These plans help your installation use and enjoy these resources while supporting programs on environmental quality, preservation of historic and archeological resources, and quality of life. But each component should exhibit compatible methods and goals. Some specific programs include:

- Land management (including training lands, wetlands and agricultural areas).
- Forest management.
- Fish and wildlife management (including endangered species).
- Historic buildings management.
- Archeological resources management.
- Native American issues.
- Pest management (as it affects the other programs).

The Supplementary Reading section specifically addresses these and other conservation programs.

Pollution Prevention

Pollution prevention is any cost-effective mechanism or practice that eliminates or reduces the sources of pollutant discharges or emissions.

Pollution prevention includes:

- Modifying manufacturing, maintenance, or other business practices.
- Modifying product designs.
- Modifying technical documents to remove requirements for hazardous materials.
- Acquiring and using environmentally preferable products and services.
- Increasing energy efficiency and conserving materials.
- Recycling.

Reducing the Army's reliance on products or processes that degrade the environment also reduces operating costs and liability from environmental compliance and cleanup.

The Army Pollution Prevention Investment Strategy:

- Reduce hazardous and nonhazardous waste generation and disposal.
- Improve hazardous material management by implementing Hazardous Material Control Centers.
- Review and revise technical documentation to remove requirements for hazardous material use.
- Incorporate pollution prevention into all stages of acquisition and procurement.
- Implement Integrated Pest Management to reduce herbicide and pesticide use.
- Research, develop, test, qualify, and transfer new pollution prevention technology.

Environmental Restoration

The Defense Environmental Restoration Program (DERP), established in 1984, is a comprehensive program that identifies and cleans up hazardous waste sites at DoD installations and formerly used defense properties. The Installation Restoration Program (IRP), the major element of the DERP, is DoD's program for meeting its responsibilities under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), the Superfund Amendments and Reauthorization Act of 1986 (SARA), and Executive Order 12580.

The IRP is funded by an Army transfer account known as Environmental Restoration, Army (ER,A). The IRP process includes: the preliminary assessment (PA); site inspection (SI); remedial investigation and feasibility study (RI/FS); and remedial design and remedial action (RD/RA).

The IRP differs from the environmental compliance program in that it focuses on past operations (generally before 1980). The Supplementary Reading section contains more information on the IRP.

What Is Environmental Consideration and Documentation?

The National Environmental Policy Act (NEPA) requires federal agencies to consider the environment when proposing, undertaking, or funding projects, operations, or activities. NEPA establishes a process for soliciting public comment and documenting consideration of the environment in decision-making. The nature and scale of a proposed action, public concern, and existing or potential environmental impacts all influence the scope of consideration necessary under NEPA. AR 200-2 is the Army regulation pertaining to NEPA analysis.

There are three essential degrees of environmental consideration requiring documentation for any major action with environmental impacts ranging from none to significant. AR 200-2 includes information on formats for documentation.

A Record of Environmental Consideration (REC) is used most often at the installation level. This brief document describes a proposed action and explains why further environmental analysis is not needed. It is used for projects that NEPA does not cover or that existing documentation address. **RECs** are also prepared when a project corresponds to a **categorical exclusion (CX)**. **CXs** are categories of activities predetermined not to impact the environment. The **CX** is a decision tool intended to reduce paperwork and to eliminate unnecessary analysis.

An Environmental Assessment (EA) is required for a proposed action that may adversely affect the environment. An **EA** concisely provides enough evidence and analysis of effects and alternatives for the public and decision-makers to determine whether a proposed action will significantly impact the environment. A **Finding of No Significant Impact (FNSI)** accompanies an **EA** when a proposed action' s impacts to the environment will be minimal. When an **EA** documents expected significant impacts from a proposed action, a **Notice of Intent (NOI)** to develop an **Environmental Impact Statement (EIS)** may be the next documentation requirement.

An Environmental Impact Statement (EIS) ensures early consideration of the environment in decision-making on proposed activities that will impact the environment. The **EIS** must contain a fair and concise discussion of all significant environmental impacts and alternatives for action and mitigation for any proposed major action. The process for developing an **EIS** requires greater opportunities for public participation. A **Record of Decision (ROD)** explaining why the decision-maker chose a certain course of action and mitigation is the decision document associated with the final **EIS**.

What Must be Done at My Installation?

You are the key to a strong, active environmental program at your installation.

How can I develop a strong environmental program?

Meet with your environmental management team, which can consist of the environmental coordinator, public affairs officer, legal advisor, safety and occupational health manager, preventive medicine officer, resource manager and land manager. Let them brief you on the environmental program.

Place the proper emphasis on the environmental program at all levels of your staff. However, the execution and success of your environmental program requires full commitment from all activities, not just the environmental office.

Support an active Environmental Quality Control Committee (EQCC). Chair it personally and convene it monthly. Ensure the director of each major staff section and representatives from legal, medical, safety, range management, resource management, public affairs, logistics, Defense Reutilization and Marketing Office and tenant unit commanders attend.

Become familiar with the current versions of Army and MACOM environmental regulations. Army environmental regulations are being transitioned into the 200 series, specifically ARs 200-1 through 200-5. Some supporting ARs will remain in the 420 series (ARs 420-40,-49 and -76).

Periodically review documentation received from regulatory agencies with the environmental coordinator. Make sure environmental requirements are identified and transmitted to various support organizations through the MACOMs or other appropriate chain of command.

Meet with tenant commanders and seek their support and involvement in the program. Strive for early and close coordination between them and weapon system managers. Encourage the active participation of tenant commanders in EQCC meetings.

Environmental Quality Control Committees:

If your installation does not have a formal Environmental Quality Control Committee (EQCC), consider the following:

- An EQCC provides a forum to address and resolve complex environmental issues that can affect the installation.
- Regularly scheduled EQCC meetings help installation commanders and staff learn more about the impact of installation activities on the environment, as well as the impact of environmental considerations on installation operations. Other commanders and directors of tenant activities who attend EQCC meetings get both an environmental education and a chance to hear the installation commander's concerns and guidance on various environmental issues.
- Occasionally, questions raised during EQCC meetings may lead to discussions on controversial and unresolved issues. This gives present subordinate commanders a chance to hear "first hand" the installation commander's comments and guidance on complex subjects, and can lead to swift and exponential action.
- AR 200-1 requires that installations conduct periodic EQCC meetings chaired by the installation commander. The regulation defines "installations" as facilities that are the responsibility of the Reserve support commands, Army National Guard facilities that are the responsibility of state and territory adjutant generals, and active duty installations. The regulation also calls for an EQCC at Department of the Army Headquarters and an EQCC or equivalent at the major command level.

Develop good working relationships with regulatory and other officials from the EPA, the U.S. Fish and Wildlife Service, state and local agencies or groups.

File those Reports!

Taking care of the many regulatory and Army reporting requirements is an important part of building your installation environmental program. The frequency of regulatory reports depends on the program area. Reporting requirements also vary from state to state, and your MACOM may have additional reporting requirements.

Army higher headquarters require four principal, automated environmental reports:

The Installation Status Report (ISR), Part II (Environment). A "macro-level" view of the installation's environmental program, the ISR helps commanders justify and prioritize limited resources. ISR Part II assesses installation environmental compliance, summarizes environmental conditions, and measures mission impacts and the effectiveness of environmental programs. Analyzing ISR data should help you to improve installation conditions and ultimately the readiness of forces your installation supports.

Environmental Program Requirements (EPR) Report. Formerly known as the A-106 and the 1383 report, the EPR report is the primary way Army managers program and plan the resources they need to effectively execute the Army Environmental Program in a manner consistent with congressional, DoD and service priorities. The EPR process also collects the data necessary for certain DoD environmental budget reporting requirements to Congress. As the standard Army method to plan, program, and budget environmental programs, the EPR reporting process combines good environmental stewardship practices with attaining and maintaining compliance with existing laws, regulations, executive orders, final governing standards and international agreements.

Uses of EPR data:

- Refine and validate requirements for the budget year.
- Support planning, programming and budgeting for the outyears.
- Build the program objective memorandum.
- Allocate resources consistent with congressional, DoD, and HQDA program priorities.
- Track project execution.
- Demonstrate accomplishments and expenditures to Congress.

The Environmental Quality Report (EQR). Previously known as Army Compliance Tracking System (ACTS), the EQR tracks and reports the status of three environmental media areas. The EQR process mainly tracks compliance with environmental laws and regulations, but it also includes management indicators for pollution prevention and conservation. EQR is the Army's principal means of tracking enforcement actions, inspections, compliance agreements, fines, penalties, and permits — which all are reported quarterly. Remaining management indicators like pest management and natural and cultural resources are reported annually. EQR's compliance portion reflects real-time status of environmental actions. Data from the report help meet the reporting requirements of the Defense Environmental Quality Program Annual Report to Congress, RCS DD-A&T (A) 1997, and HQDA.

Army policy requires installations to immediately report enforcement actions and reportable quantity spills to their MACOMs. The MACOM will report it to Department of Army Headquarters within 48 hours through the U.S. Army Environmental Center (USAEC).

The Defense Sites Environmental Restoration Tracking System (DSERTS). The system helps meet upward reporting requirements and manage the Army's environmental cleanup program. DSERTS is a source of information for the DERP Annual Report to Congress, base cleanup plans and Installation Action Plans. It also tracks site level cost-to-complete and Relative Risk Site Evaluations data.

Talk with your environmental coordinator or check the Supplementary Reading section for more information on reporting.

What Happens if My Installation is Slated for Closure?

Your responsibilities to comply with environmental laws do not end if your installation is slated to close. In fact, such status involves additional procedures. These are discussed in the Supplementary Reading section under "Real Property Transactions and Base Closure."

How Do I Know if I'm In Compliance?

You can determine your environmental compliance status in two ways: through a formal inspection by a regulatory agency (such as the EPA or state agency) or through the Environmental Compliance Assessment System.

Regulatory inspections

A state or federal regulatory agency may notify you of its intent to inspect your installation. However, regulatory agencies can legally inspect federal facilities at any time.

These inspections normally concentrate on one particular program area, such as hazardous waste management or endangered species management. The EPA Federal Facility Compliance Strategy (also known as the EPA Yellow Book) includes inspection frequency guidelines. For example, inspections for hazardous waste facilities under the Resource Conservation and Recovery Act (RCRA) generally occur annually. Inspections of other program areas may occur at different intervals. A growing number of state regulatory agencies perform "combined inspections" covering more than one program area.

After the inspection, the regulatory agency usually provides you with an exit briefing that summarizes its findings. You also should receive a letter (normally three to six months after the inspection) defining any non-compliance situations. This letter, often referred to as an NOV or Notice of Violation, documents your compliance status, based on the inspection, and asks you to respond with a detailed corrective action plan. If the regulatory agency finds you in compliance, you may not receive written confirmation. After three to four months, you may wish to contact the agency to determine the installation's compliance status.

The Supplementary Reading section "How Can I Prepare for an Environmental Inspection?" contains additional information on inspections.

The ECAS Program

The Environmental Compliance Assessment System (ECAS) gives you a comprehensive "snapshot" of your installation's compliance status. The goal of the program is to attain, sustain, plan and program resources to implement corrective actions, and monitor compliance with applicable environmental regulations.

An environmental compliance assessment addresses:

- Air Emissions Management
- Cultural Resources Management
- Hazardous Materials Management
- Hazardous Waste Management
- Natural Resources Management
- "Other" areas such as National Environmental Policy Act (NEPA), Environmental Noise, the Installation Restoration Program (IRP), Pollution Prevention (P2), Ozone Depleting Chemicals (ODCs) and Program Management
- Pesticide Management
- Petroleum, Oil and Lubricant (POL) Management
- Solid Waste Management
- Storage Tank Management
- Toxic Substances Management
- Wastewater Management
- Water Quality Management (Potable Water)

AR 200-1 requires that installations undergo external assessments at least once every three years. Your MACOM coordinates your external assessments, which are performed by various independent groups, Army agencies or contractors.

Except during years of an external inspection, installation personnel perform internal assessments each year. Active CONUS Army installations can fulfill the internal assessment requirement by completing the Installation Status Report (ISR) Part II (Environment).

Several tools are available for both types of assessments: a federal compliance protocol used by all military services called the TEAM Guide; state compliance protocols; active Army, Army National Guard and Army Reserve supplements that include particular agency and DoD regulations and best management practices; and operation-specific "user's guides" to help active Army installation personnel easily perform internal assessments.

You and your staff should actively support assessments and those performing them. Participate in the pre-briefing, the daily summary meetings and the exit briefing. Make sure the installation staff reviews the findings in a timely manner and helps select the corrective actions.

The findings, corrective actions and resources needed to achieve compliance are formally presented in an Environmental Compliance Assessment Report (ECAR) no later than 11 weeks after the on-site assessment. The root cause of a corrective action may be administrative or policy, training, operational or procedural, project or equipment oriented. A formal funding plan, known as the Installation Corrective Action Plan (ICAP), should be available no later than eight weeks after the ECAR.

The external assessment team may not address every environmental program area, so remember to include all programs in your internal ECAS assessments. Installations are required to coordinate their activities with relevant regulatory agencies, such as:

- The U.S. Fish and Wildlife Service.
- The Advisory Council on Historic Preservation.
- The State Historic Preservation Office.
- The Council on Environmental Quality.

These agencies do not perform actual inspections or issue Notices of Violation, but statutory authority requires installations to perform specific assessments, coordinate reports and consult with agencies before taking certain actions.

What Happens if I'm Not In Compliance?

If regulatory inspectors find "non-compliance" at your installation, the regulatory agency will issue a Notice of Violation (NOV) or an equivalent, written compliance request. The NOV prescribes what you must do, by when, to meet compliance — but not how do it. Though timetables and notices vary by program area, you generally have about 30 days to respond to the regulatory agency.

Most NOVs can be resolved between the installation and the regulatory agency. However, Army policy requires you to immediately notify your MACOM when your installation receives an NOV.

If you fail to adequately respond to the NOV, or regulators feel there is an imminent, substantial threat to human health or the environment, the EPA or the state will seek to negotiate a Compliance Agreement or Consent Order. The EPA Yellow Book describes the regulatory enforcement strategy for federal facilities. The negotiated Compliance Agreement or Consent Order will specify actions and a completion schedule. These are mutually agreed upon corrective action plans.

At government-owned contractor-operated (GOCO) installations, the EPA may seek enforcement actions against both the government and the contractor. Non-compliance in other areas, procedural resolutions such as the National Environmental Policy Act or the National Historic Preservation Act, can result in a restraining order or injunction that halts activity until those procedural compliance steps are taken.

If you find compliance deficiencies by some other means (usually through self-inspection), coordinate with your MACOM to determine a course of action. You should develop and budget for corrective actions addressing compliance deficiencies.

WHAT CAN I DO TO GET INTO COMPLIANCE?

Your most important tool for achieving and maintaining compliance is a strong and active environmental coordinator who is supported by a solid environmental management team.

Once you have determined that you are out of compliance, you should:

- Notify your MACOM.
- Negotiate with the regulatory agency on compliance requirements and timetables.
- Ensure any proposed compliance agreement is reviewed by the Department of the Army Environmental Law Division.
- Develop a corrective action plan (some MACOMs call this an "environmental management plan").
- Prepare and submit an Environmental Program Requirements (EPR) report for each project requirement (the Supplementary Reading section explains the EPR process).
- Implement your corrective action plan.
- Seek help from support agencies.

Notifying the MACOM of program requirements is critical to receiving the resources necessary to achieve and maintain compliance. You should review the EPR report before it's sent to the MACOM. The program requirements should be identified in the installation budget submission to your MACOM.

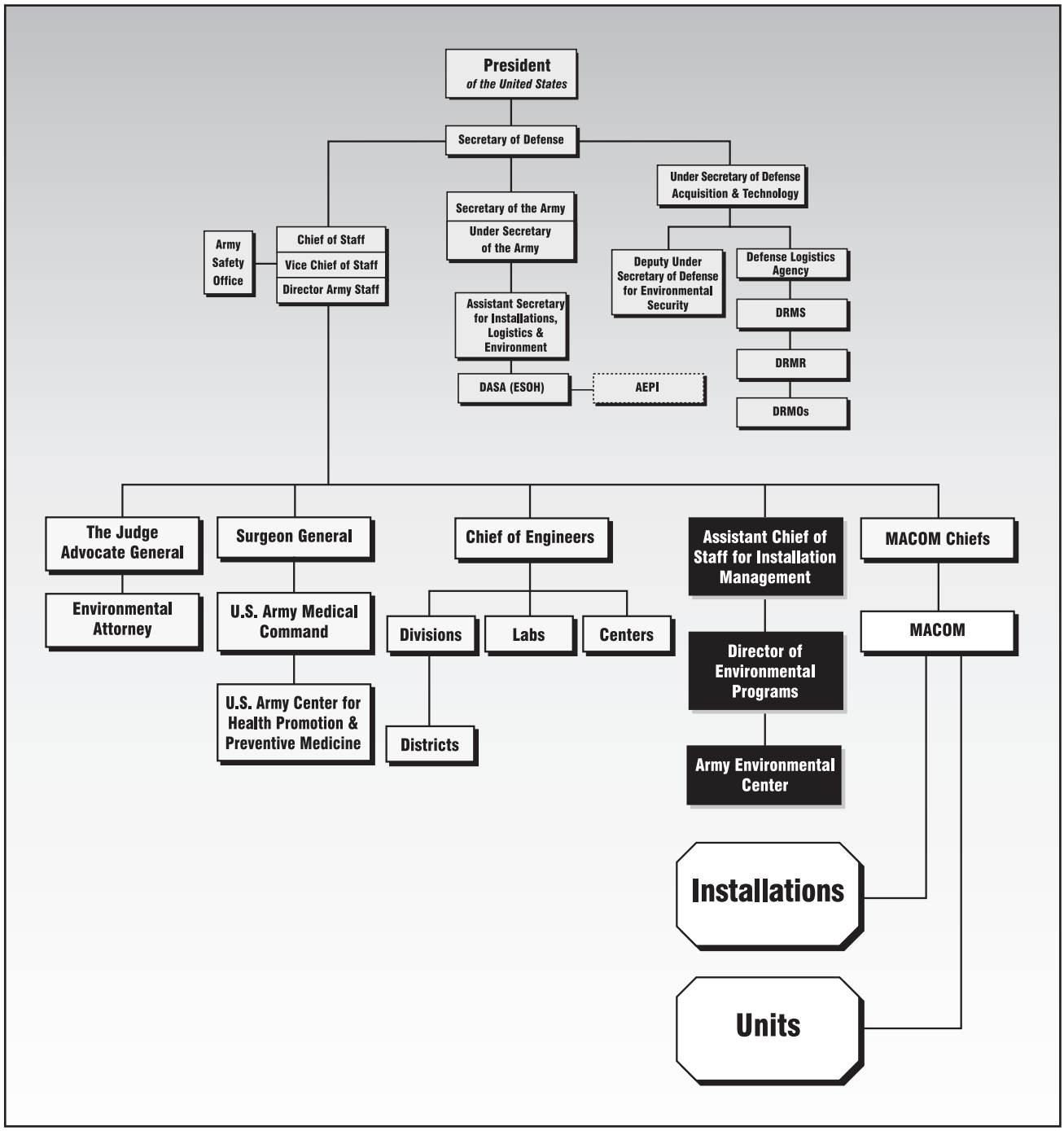
When negotiating a compliance schedule, include a condition that completion is subject to availability of funds. Incurring an unconditional obligation to spend money in future fiscal years may result in a violation of law.

THE FOUR MOST IMPORTANT ACTIONS YOU CAN TAKE TO ACHIEVE AND MAINTAIN COMPLIANCE ARE:

- Demonstrate your concern for environmental compliance.
- Establish an active environmental training program.
- Establish standard operational procedures that incorporate environmental considerations.
- Establish internal enforcement mechanisms.

Who Is on My Environmental Management Team?

THE ARMY'S ENVIRONMENTAL TEAM



Regional Environmental Coordination

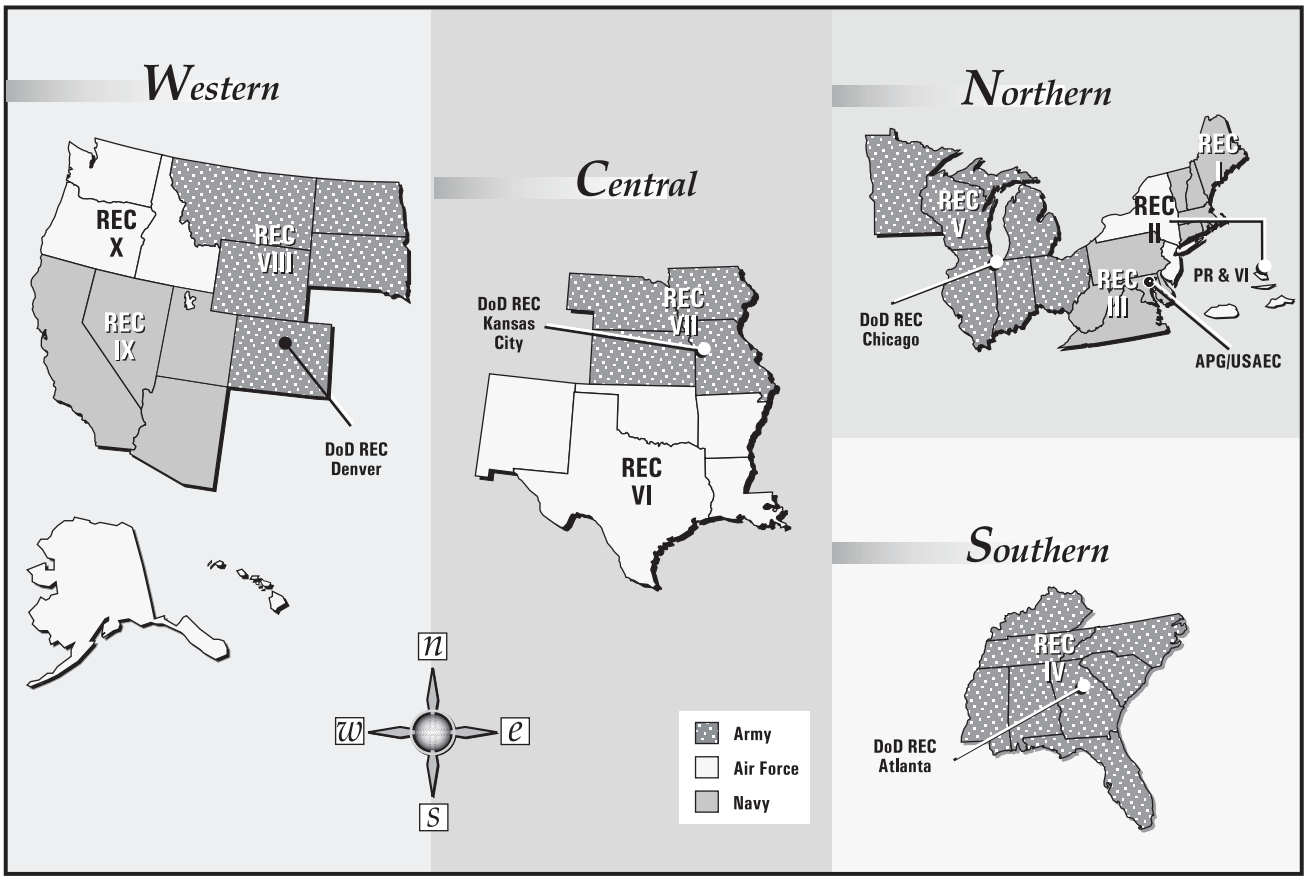
Department of Defense (DoD) Instruction 4715.2 sets policy and procedures for regional environmental coordination within DoD. The DoD Regional Environmental Coordinators (RECs) facilitate the military's environmental programs at the state and regional levels and provide a regional focus for DoD environmental concerns and activities. A DoD REC is assigned to each of the 10 Environmental Protection Agency (EPA) federal regions. DoD responsibility for regional coordination is apportioned between the Army, Air Force, and Navy. The Army is the executive agent for standard federal regions IV, V, VII and VIII; the Navy is the executive agent for regions I, III and IX and the Air Force for regions II, VI and X.

When an environmental regulatory issue involves two or more of the services in their region, the DoD REC organizes joint communication of these concerns to regional regulatory authorities. DoD RECs also initiate and participate in partnering organizations and forums (such as those for pollution prevention) and serve as a focal point for coordinating regional environmental activities among the services, states and EPA regions.

Along with the DoD RECs from each of the services, the Army established Regional Environmental Offices (REOs) in four geographical areas of responsibility (southern, northern, western and central regions) covering the United States and its territories. The Army-appointed DoD RECs serve as the REO chiefs.

Each Army REO staff includes Army Service RECs, who typically work issues in a specific EPA region in their REO's area of responsibility. Army RECs coordinate the Army's environmental program with regulators on state and regional levels. Because the Army RECs primarily talk with state environmental departments, being ombudsman for Army environmental activities is a large part of the REO mission. The offices also facilitate consistent interpretation and application of Army environmental policies at Army installations, Army Reserve regional support commands and Army National Guard activities. This task includes ensuring major command awareness of initiatives that concern subordinate commands, and those of the Army National Guard Readiness Center (National Guard Bureau) and the state adjutants general.

Commanders should feel free to use the REOs as a resource to assist them in achieving the Army's environmental stewardship goals and objectives.



ISSUES, COMMENTS AND "GOOD NEWS" STORIES SHOULD BE DIRECTED TO YOUR ARMY REC. THE ARMY RECS ARE LOCATED IN THE REGIONAL ENVIRONMENTAL OFFICES LISTED BELOW.

- **NORTHERN REO** - Aberdeen Proving Ground, Maryland.

  Army coordination for Regions I, II, III and V (DoD lead in Region V).

- **SOUTHERN REO** - Atlanta, Georgia.

  Army coordination and DoD lead for Region IV.

- **CENTRAL REO** - Kansas City, Missouri.

  Army coordination for Regions VI and VII (DoD lead for Region VII).

- **WESTERN REO** - Denver, Colorado.

  Army coordination for Regions VIII, IX and X (DoD lead for Region VIII).

How Do I Handle Public Involvement?

The terms "public relations" and "public involvement" appear interchangeable, but they are not.

Public relations is a planned effort to influence opinion through socially responsible performance, based on satisfactory two-way communication.

Public involvement is a planned effort to involve citizens in the decision-making process and to prevent or resolve citizen conflict through two-way communication.

Despite the differences, there are several common elements of public involvement and public relations.

The importance of public involvement to an installation environmental program cannot be overemphasized. Many installations have learned tough lessons from negative news coverage, citizen-generated congressional interest, and adverse public reaction — all reflections of inadequate public involvement.

Negative news coverage, irate political representatives and adverse public reaction are distasteful, but they're not the primary reasons why the Army actively seeks public involvement. Here are the reasons:

It's critical for mission accomplishment

Whether the environmental issue is storing hazardous waste or building a barracks complex, the goal is to get the job done. Citizen reaction has stopped many projects, either through political pressure or the courts.

It's the law

Virtually every environmental law calls for public involvement. Some requirements are more extensive than others, based on the environmental process being applied to a given situation or operation.

Regulatory Requirements

Four major areas of environmental law and regulation require your installation to sponsor or participate in public involvement efforts.

National Environmental Policy Act (NEPA). A public notice and comment period is required before proceeding with actions that may have environmental impacts, except for some proposed actions that may meet specificly defined exclusion requirements. The degree of effort required depends on whether you are producing an Environmental Impact Statement (EIS), where the environmental impacts of your project are predicted to be "significant," or an Environmental Assessment (EA), where the impacts are measurable but may not reach the level deemed "significant."

Environmental Noise. Environmental noise is one environmental issue on which practically any citizen is willing to directly express a complaint. Your Installation Compatible Use Zone (ICUZ) program lets you control and plan for environmental noise issues and limit noise-related constraints on mission activities. ICUZ public involvement includes responding to complaints, involvement with local planning boards, and public relations efforts to explain the necessity of your missions and your actions to limit noise impacts.

Environmental Restoration. Cleanup investigations and activities under the Defense Environmental Restoration Program (DERP) include public interaction through Restoration Advisory Boards and, sometimes, formal public meetings.

New and Modified Permits. Permits required under the Clean Water Act (for wastewater treatment plant discharges), Safe Drinking Water Act (water treatment plant), Clean Air Act (air emission sources), Resource Conservation and Recovery Act (certain solid and hazardous waste operations), and other laws normally include public meetings or hearings as part of the regulatory permit approval process. The regulatory agency (state or federal) is usually in charge of these.

The Public

Typically, citizens become involved in environmental issues when they feel left out of the decision-making process. Projects avoid delays when citizens are offered some part in the environmental process from the start. Interested groups and other stakeholders should be afforded the opportunity to participate. Adverse public reaction ties up technical resources and expertise that should be dedicated to accomplishing the task.

A progressive and successful program helps a project along. The activities should be managed by the public affairs officer (PAO) in close coordination with other members of the Environmental Management Team. The PAO is responsible for identifying and preparing plans for meeting public involvement requirements associated with environmental programs.

At installations that lack public affairs personnel, the installation environmental staff will be responsible for public involvement planning. The public affairs staff at your MACOM headquarters and the U.S. Army Environmental Center (USAEC) can provide assistance.

Awards Programs

Environmental Awards provide a strong opportunity to recognize the hard work of your dedicated environmental staff. They also allow you to show your local public and the regulatory community your commitment to environmental excellence. Among those available:

- DoD Environmental Security Awards.
- Secretary of the Army Environmental Awards (winners compete for DoD awards).
- Specialized awards from within your major command.
- Local, regional and national non-DoD environmental awards.
- Local (installation) award programs.

Both the Army and the DoD awards are presented in Pentagon ceremonies in April of each year.

Installations are authorized to develop internal awards programs to recognize outstanding environmental performance and especially to promote specific environmental programs. For example, under a qualifying recycling program, part of your net proceeds can be used to reward organizations doing the greatest amount of recycling.

Tips for Working with the Community:

- Understand that the environment belongs to everyone.
- Know the difference between public relations and public involvement.
- Know that the average citizen distrusts the government's representation of issues, so openness and honesty are crucial.
- Don't take criticism personally.
- Establish an expert contact (preferably in the Public Affairs Office).
- Invite comment, even from potential opponents.
- Strive for objective and accurate — but not necessarily positive — news coverage.
- Never selectively release information or "stretch" the truth.
- Maintain current fact sheets and "question-answer" papers.
- Provide any requested information as soon as possible.
- Don't be afraid to say "I don't know," and be prepared to search for answers.
- Offer briefings, site visits and tours of your facility.
- Publicize internal and external environmental awards to recognize excellence and inform the public.

Elected Officials

Many citizens will turn to their elected officials with a complaint or concern about the community. These officials can point out the need for more information and help open the lines of communication.

Implement a progressive public involvement program that provides citizens with information. This program should include methods for keeping elected officials informed of the overall environmental program, and particularly of proposed actions or operations that may have environmental consequences.

Ways to work with elected officials:

- Regularly send fact sheets or news releases about installation environmental activities.
- Provide a contact person at the installation to expedite answers to questions.
- Provide tours or briefings on environmental programs to help them understand the issues.
- Become personally involved in the communications process. Elected officials appreciate personal attention from the commander. Face-to-face communication with elected officials increases credibility and cements working relationships.

Restoration Advisory Boards

Representatives from the Environmental Protection Agency, the Defense Department, states, Native American tribes, educational institutions and citizens' groups have recommended forming citizens' advisory boards to enhance public dialogue at sites undergoing environmental cleanup. This concept became the Defense Department's Restoration Advisory Board (RAB) program.

The RAB not only provides a way to explain a cleanup program to the public; it also is a good forum for listening to what the public has to say about your installation's cleanup program. Occasionally, citizen input through a RAB has saved money and time. In any case, RAB participation enables citizens to be more involved in cleanup decisions that affect them and their families.

Although the program was initially geared toward facilitating cleanup and property transfer at Base Realignment and Closure sites, the Defense Department and Army encourage RABs at active installations. Where appropriate, commanders are encouraged to be personally involved in RABs and to determine if there is sufficient community interest in forming RABs where they don't exist. A RAB is no substitute for other community involvement activities, but it can be a powerful tool for dialogue with a community.

How Do I Implement Cost-Saving, Innovative Environmental Technologies?

Many cost-effective, innovative technologies are available to support environmental compliance, cleanup, pollution prevention and conservation programs. These technologies may include equipment, changes to procedures or modifications to processes.

To determine your technology needs and ways to apply a specific technology:

- Have your environmental management team identify existing waste management, conservation and cleanup challenges.
- Meet with tenant commanders and encourage their participation in identifying and implementing innovative technology elements within their programs.
- Have the installation's Environmental Quality Review Board identify specific environmental program elements that could benefit from use of advanced technology.
- Contact U.S. Army Environmental Center experts involved with providing access, technical support and guidance in the transfer of environmental technology throughout the Army.

  USAEC's Technology Transfer Program enables the Army to demonstrate the capabilities of emerging environmental technologies under actual working conditions at Army installations while gathering performance and cost information.

For specific information on USAEC's Technology Transfer Program:

Mailing address:

COMMANDER
U.S. Army Environmental Center
ATTN: P2 and Environmental
Technology Division
Aberdeen Proving Ground, MD 21010-5401

Phone:

Army Environmental Hotline
(800) USA-3845

E-mail: t2hotline@aec.apgea.army.mil

Web site:

http://aec-www.apgea.army.mil:8080/prod/usaec/et/et.htm

Fax: (410) 612-6836

WHAT ABOUT TRAINING?

Ensuring that personnel on your installation are well-informed and trained is good for you and the Army. AR 200-1 requires that installation personnel be trained to perform their jobs in an environmentally responsible manner, trained as legally required, and trained to respond properly in an environmental emergency. You must also ensure that training and certification records are maintained according to laws or regulations.

Your personnel need to know how to accomplish their tasks while complying with environmental regulations and meeting Army environmental standards. On-the-job training can suffice if it includes a detailed review of local standard operating procedures that address environmental requirements. At other times, classroom training will be necessary.

Some training is specifically required by law. The Resource Conservation and Recovery Act (RCRA), Occupational Safety and Health Act (OSHA), and other laws describe training requirements for some of your personnel. Many of the regulations that contain specific training requirements also require regular refresher training. Sometimes, exact training plans and records are needed.

LEGALLY REQUIRED TRAINING COVERS:

- Hazardous waste generators and accumulation points, shipping, and permitted storage or waste treatment.
- Packing, receiving, transporting and certifying hazardous materials shipments.
- Work with hazardous or toxic chemicals (except soldiers performing military-unique tasks). Some specific chemicals require training if workers could be even infrequently exposed to hazards.
- Uncontrolled hazardous waste site investigations and cleanup.
- Asbestos demolition and removal; maintenance and repair work involving asbestos disturbance; and asbestos sampling.
- Exposure to lead-based paint during building maintenance, repair, demolition or removal.
- Discovery and response to spills of oil or hazardous substances.
- Pesticide application.
- Operating boiler plants, incinerators, water or wastewater treatment facilities (as required by your state).

AR 200-1 requires you to appoint and train organizational and unit environmental compliance officers to help unit commanders, supervisors and managers meet their environmental responsibilities.

Your supervisors and small-unit commanders need to know where to find help in managing their operations in a manner consistent with applicable environmental laws and regulations. Their environmental compliance officers should be their first level of support. The compliance officers should get their primary compliance information from the installation environmental coordinator and his or her staff. These "layers" of knowledge and assistance should be structured to promote efficient use of installation resources while providing answers to questions most commonly asked by the people who make environmental compliance happen. The regulation gives you discretion in selecting "appropriate organizational levels" for these appointments. An installation "train the trainer" program and other resources are available to help you provide training for your environmental compliance officers.

Supervisors and small-unit commanders may also need training to understand what is required of them. Upper-level managers and senior commanders need training to increase awareness of both their overall environmental responsibilities, and how their decisions can influence the installation's environmental quality.

AR 200-1 also points out that the confusing and overlapping requirements of various environmental, safety, and occupational health training regulations may result in costly over-training or under-training. It recommends you consider developing — through the combined efforts of your Environmental Quality Control Committee's member organizations — an installationwide environmental training program. This may be supplemented by a comprehensive written plan or at least by a simple document that defines what training is required, for whom, and how to get it.

Training Tools

Where do you go for environmental training resources within the Army?

Army Logistics Management College (ALMC) at Fort Lee, Virginia, emphasizes environmental management training. The installation environmental "train the trainer" program is available through ALMC's *Installation Environmental Trainer Course*. No tuition is required other than for non-DoD employees and contractors.

Center for Environmental Initiatives and Hands-On Training (CEIHOT) at Fort Sill, Oklahoma, emphasizes "hands on" environmental occupational skills training in such topics as hazardous waste handling, hazardous materials spill response, and asbestos removal. Tuition charges apply.

Corps of Engineers Professional Development Support Center at Huntsville, Alabama, operates the "Proponent Sponsored Engineer Corps Training" program, more commonly known as PROSPECT. It emphasizes environmental courses related to Corps civil and military support missions, and environmental training in scientific and technical topics. Tuition charges apply.

In addition, environmental awareness training, materials and assistance are available to suit your specific needs. Army Training and Doctrine Command (TRADOC) is incorporating environmental awareness training into Army military school curricula through the **U.S. Army Engineer School (USAES)**, TRADOC's executive agent for environmental training integration. These products include:

"The Unit and the Environment," TVT-5-129, a general environmental awareness training video for soldiers. It includes a training support package and is available through your Training and Audiovisual Support Center (TASC).

The *Unit Environmental Compliance Officers Course*, the basic training support package for use locally by graduates of ALMC's *Installation Environmental Trainer Course*.

Three awareness courses for individual soldiers, available through the Army Correspondence Course Program:

- EN5700 (E-1 through E-4) — Junior Enlisted Environmental Awareness Training.
- EN5702 (E-5, E-6, and O-1 through O-3) — Small Unit Leader Environmental Awareness Training.
- EN5704 (E-7 through E-9, O-4 and above) — Senior Leader Environmental Awareness Training.

The **Army Environmental Awareness Resource Center (AEARC)**, formerly the Environmental Training Support Center, at Huntsville, Alabama, supports Army Headquarters, the Army Environmental Center, MACOMs and installations. AEARC answers queries about environmental training and awareness products, sources and materials. It also offers products and services to assist you in building your environmental training programs. For example:

The *Defense Services Directory of Environmental Training Courses*, which is updated annually and available electronically from AEARC.

The *Environmental Compliance Awareness and Training Survey (ECATS)*, on computer disk, which allows managers, supervisors and commanders to determine legally mandated environmental training requirements for their staff, workers and soldiers.

"Entrusted to Our Care," a short awareness video for soldiers, civilian personnel, installation residents and visitors. Some MACOMs also have modified versions which discuss their specific programs.

In conjunction with elements of the Professional Development Support Center, AEARC has developed five "exportable" courses for installation use: *Introduction to Hazardous Waste Management*, *First Responder Levels 1 and 2; NEPA and Military Training; Hazardous Waste Operator (8-hour Refresher);* and *District Engineer/Installation Environmental Office Interface*. These courses include video segments, a camera-ready reproducible student study guide, and a facilitator's guide to aid local presentation and tailoring with local SOPs, guest speakers, and the like.

AEARC is designated by the Army Training Support Center to provide installation support for development of Integrated Training Area Management (ITAM) Environmental Awareness (EA) products such as graphic training aids, brochures and posters. EARC has access to an extensive library of environmental video footage and can assist in the production of ITAM-related videos.

FOR INFORMATION ON THE SCHOOLS AND RESOURCES LISTED ABOVE, CALL AEARC AT (256) 895-7413/7410/7411/7408 OR VISIT AEARC'S WEB SITE AT WWW.HND.USACE.ARMY.MIL/EARC/

Best use of your installation's available resources, supplemented by appropriate training for selected groups or individuals, can make the difference in both quality of life and your compliance status.

Where Do I Go for Help?

Aside from these Army contacts, federal, state and local agency sources of information also may be helpful.

Organizations & Activities

AAPPSO	Army Acquisition Pollution Prevention Support Office
AEARC	Army Environmental Awareness Resource Center
ALMC	U.S. Army Logistics Management College
CEIHOT	Center for Environmental Initiatives and Hands-On Training
CERL	U.S. Army Construction Engineering Research Laboratory
CRREL	U.S. Army Cold Regions Research Engineering Laboratory
DA	Department of the Army
DCSOPS	Deputy Chief of Staff for Operations and Plans
DoD	Department of Defense
ODEP	Office of the Director of Environmental Programs
PDSC	Professional Development Support Center (Army Corps of Engineers)
USACHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
USACPW	U.S. Army Center for Public Works
USAEC	U.S. Army Environmental Center
USATCES	U.S. Army Technical Center for Explosives Safety
WES	U.S. Army Waterways Experiment Station

General Technical Contact:

The Army Environmental Response Line
CONUS (800) USA-EVHL (872-3845)
OCONUS (410) 671-1699
DSN 584-1699

Specific Technical Contacts

Air Pollution Management

USACHPPM Air Pollution Management Program
(410) 671-3500 ▪ DSN 584-3500

Ambient Air Quality Management Program
(410) 671-3500/2509 ▪ DSN 584-3500/2509

USAEC Environmental Quality Division
(410) 671-1214 ▪ DSN 584-1214

USACPW Sanitary and Chemical Division
(703) 806-5201 ▪ DSN 656-5201

Asbestos

EPA Asbestos Hotline
(800) 368-5888

USACPW Buildings and Structure Division
(703) 806-5979 ▪ DSN 656-5979

USAEC Environmental Quality Division
(410) 612-7076 ▪ DSN 584-7076

CFCs and Halons

AAPPSO
(703) 617-9488 ▪ DSN 284-9488

USACHPPM Air Pollution Management Program
(410) 671-3500 ▪ DSN 584-3500

USAEC Environmental Quality Division
(410) 612-7069 ▪ DSN 584-7069

USACPW Mechanical and Energy Division
(703) 806-6071 ▪ DSN 656-6071

Cultural Resources

ODEP Conservation Team
(703) 693-0677 ▪ DSN 223-0677

USAEC Environmental Quality Division
(410) 671-3206 ▪ DSN 584-3206

Data Management

USAEC Information Management Branch
(410) 671-1650 ▪ DSN 584-1650

USAEC Environmental Quality Division
(410) 671-1674 ▪ DSN 584-1674

Emergency Planning and Community Right-to-Know

USACPW Sanitary and Chemical Division
(703) 806-5196 ▪ DSN 656-5196

USAEC Environmental Quality Division
(410) 671-1674 ▪ DSN 584-1674

Endangered and Threatened Species

USAEC Environmental Quality Division
(410) 671-3206 ▪ DSN 584-3206

Environmental Compliance Assessment System (ECAS)

USAEC Environmental Quality Division
(410) 671-1674 ▪ DSN 584-1674

Environmental Noise

USACHPPM Environmental Noise Program
(410) 671-3829 ▪ DSN 584-3829

USAEC Environmental Quality Division
(410) 671-1590 ▪ DSN 584-1590

Environmental Restoration Program

USAEC Environmental Restoration Division
(410) 671-3618 ▪ DSN 584-3618

Explosives Safety [Remediation]

USATCES
(815) 273-8741/8784/8876
DSN 585-8741/8784/8876

Groundwater

USACHPPM Groundwater and Solid Waste Program
(410) 671-2024 ▪ DSN 584-2024

USACPW Sanitary and Chemical Division
(703) 806-5196 ▪ DSN 656-5196

Hazardous and Toxic Waste and Materials Management

USAEC Environmental Quality Division
(410) 612-7069 ▪ DSN 584-7069

USACPW Sanitary and Chemical Division
(703) 806-5196 ▪ DSN 656-5196

EPA RCRA/EPCRA/Superfund Hotline
(800) 424-9346

USACHPPM Hazardous and Medical Waste Management Program
(410) 671-3651 ▪ DSN 584-3651

EPA TSCA Hotline
(202) 554-1404

Historic Preservation

USAEC Environmental Quality Division
(410) 671-3206 ▪ DSN 584-3206

Integrated Training Area Management

DCSOPS Training Directorate
(703) 614-4990 ▪ DSN 224-4990

USAEC Environmental Quality Division
(410) 671-1556 ▪ DSN 584-1556

National Environmental Policy Act (NEPA)

ODEP Foundation Team
(703) 693-0543 ▪ DSN 223-0543

USAEC Environmental Quality Division
(410) 671-3206 ▪ DSN 584-3206

Natural Resources

USAEC Environmental Quality Division
(410) 671-3206 ▪ DSN 584-3206

Pesticides and Pest Management

USACHPPM Entomology Program
(410) 671-3613 ▪ DSN 584-3613

DoD Pesticide Hotline
(410) 671-3773 ▪ DSN 584-3773

USAEC Environmental Quality Division
(410) 671-3206 ▪ DSN 584-3206

EPA Hotline [Oregon State University]
(800) 858-7378

Pollution Prevention

USAEC Environmental Technology Division
(410) 671-4713 ▪ DSN 584-4713

USACHPPM Hazardous and Medical Waste Management Program
(410) 671-3651 ▪ DSN 584-3651

USACPW Sanitary and Chemical Division
(703) 806-5201 ▪ DSN 656-5201

AAPPSO
(703) 617-2816 ▪ DSN 767-2816

Public Involvement

USAEC Public Affairs Office
(410) 671-2556 ▪ DSN 584-2556

Radon

USACPW Sanitary and Chemical Division
(703) 806-5202 ▪ DSN 656-5202

Resourcing, Documenting and Reporting [Environmental Program Requirements]

USAEC Information Management Branch
(410) 671-1650 ▪ DSN 584-1650

USAEC Environmental Quality Division
(410) 671-1674 ▪ DSN 584-1674

Solid Waste Management

USACHPPM Groundwater and Solid Waste Program
(410) 671-2024 ▪ DSN 584-2024

USAEC Environmental Quality Division
(410) 612-7069 ▪ DSN 584-7069

USACPW Sanitary and Chemical Division
(703) 806-5211/5214 ▪ DSN 654-5211/5214

Stormwater

USACPW Sanitary and Chemical Division
(703) 806-5201 ▪ DSN 656-5201

USAEC Environmental Quality Division
(410) 612-7072 ▪ DSN 584-7072

Technology Development

USAEC Environmental Technology Division
(410) 671-2466 ▪ DSN 584-2466

CERL Environmental Division
(800) USA-CERL [872-2375]

WES Environmental Engineering Division
(601) 634-3703

CRREL Research and Engineering Directorate
(603) 646-4265 ▪ DSN 684-4265

Training (Environmental)

ALMC Environmental Management Department
(804) 765-4806 ▪ DSN 539-4806

ALMC Registrar
(804) 765-4965 ▪ DSN 539-4965

USAEC Environmental Quality Division
(410) 671-1685 ▪ DSN 584-1685

Army Corps of Engineers PDSC (registrar)
(256) 895-7420/7424 ▪ DSN 760-7420/7424

AEARC
(256) 895-7408 ▪ DSN 760-7408

CEIHOT
(580) 442-2111 ▪ DSN 639-2111

Wastewater Management

USACHPPM Surface Water and Wastewater Program
(410) 671-3816 ▪ DSN 584-3816

USACPW Sanitary and Chemical Division
(703) 806-5201 ▪ DSN 656-5201

USAEC Environmental Quality Division
(410) 612-7072 ▪ DSN 584-7072

Water Supply

USACHPPM Water Supply Management Program
(410) 671-3919 ▪ DSN 584-3919

USACPW Sanitary and Chemical Division
(703) 806-5201 ▪ DSN 656-5201

Wetlands

EPA Wetlands Hotline
(800) 832-7828

EPA Federal Facilities Coordinators

EPA Region I (CT, MA, ME, NH, RI, VT)
(617) 565-3927

EPA Region II (NJ, NY, PR, VI)
(212) 637-3492

EPA Region III (DC, DE, MD, PA, VA, WV)
(215) 566-2750

EPA Region IV (AL, FL, GA, KY, MS, NC, SC, TN)
(404) 562-8520

EPA Region V (IL, IN, MI, MN, OH, WI)
(312) 353-6478

EPA Region VI (AR, LA, NM, OK, TX)
(214) 665-6430

EPA Region VII (IA, KS, MO, NE)
(913) 551-7400

EPA Region VIII (CO, MT, ND, SD, UT, WY)
(303) 312-7046

EPA Region IX (AZ, CA, HI, NV)
(415) 744-1569

EPA Region X (AK, ID, OR, WA)
(206) 553-1747

Department of Defense Regional Environmental Coordinators (RECs)

Region I
(860) 449-3976

Region II
(404) 562-4200

Region III
(757) 322-2909

Region IV
(404) 347-1570

Region V
(410) 671-2427

Region VI
(214) 767-4653

Region VII
(816) 983-3449

Region VIII
(303) 289-0260

Region IX
(619) 532-4534

Region X
(415) 977-8849

Policy and Program Oversight

ODEP Teams

Compliance
(703) 693-0545 ▪ DSN 223-0545

Conservation
(703) 693-0677 ▪ DSN 223-0677

Foundation
(703) 693-0500 ▪ DSN 223-0500

Pollution Prevention
(703) 693-0551 ▪ DSN 223-0551

Restoration
(703) 693-0643 ▪ DSN 223-0643

Range Rule
(703) 693-0548 ▪ DSN 223-0548

ODEP Areas of Specialization

Acquisition & Logistics (P2)
(703) 693-0551 ▪ DSN 223-0551

EQR/CDMM (Compliance)
(703) 693-0545 ▪ DSN 223-0545

Alternate Fuel Vehicles
(703) 693-0544 ▪ DSN 223-0544

AR 200-1/DA Pamphlet 200-1 (Compliance)
(703) 693-0545 ▪ DSN 223-0545

AR 200-2 (NEPA, Foundation Team)
(703) 693-0543 ▪ DSN 223-0543

AR 200-3
(703) 693-0675 ▪ DSN 223-0675

AR 200-4
(703) 693-0675 ▪ DSN 223-0675

AESAPs (Foundation)
(703) 693-0500/0543 ▪ DSN 223-0500/0543

Archeology
(703) 693-0675/0677 ▪ DSN 223-0675/0677

Army Sciences Board
(703) 693-0514 ▪ DSN 223-0514

Internet Resources

ODEP
http://www.hqda.army.mil/acsimweb/env/

USAEC Home Page
http://aec-www.apgea.army.mil:8080/

Army Home Page
http://www.army.mil

AEARC Home Page
http://www.hnd.usace.army.mil/earc/

Supplementary Reading

This section provides background information on major environmental programs, directions on regulations, and references. It also includes a legislative overview, information on resourcing and reporting, and other topics.

LEGISLATIVE OVERVIEW

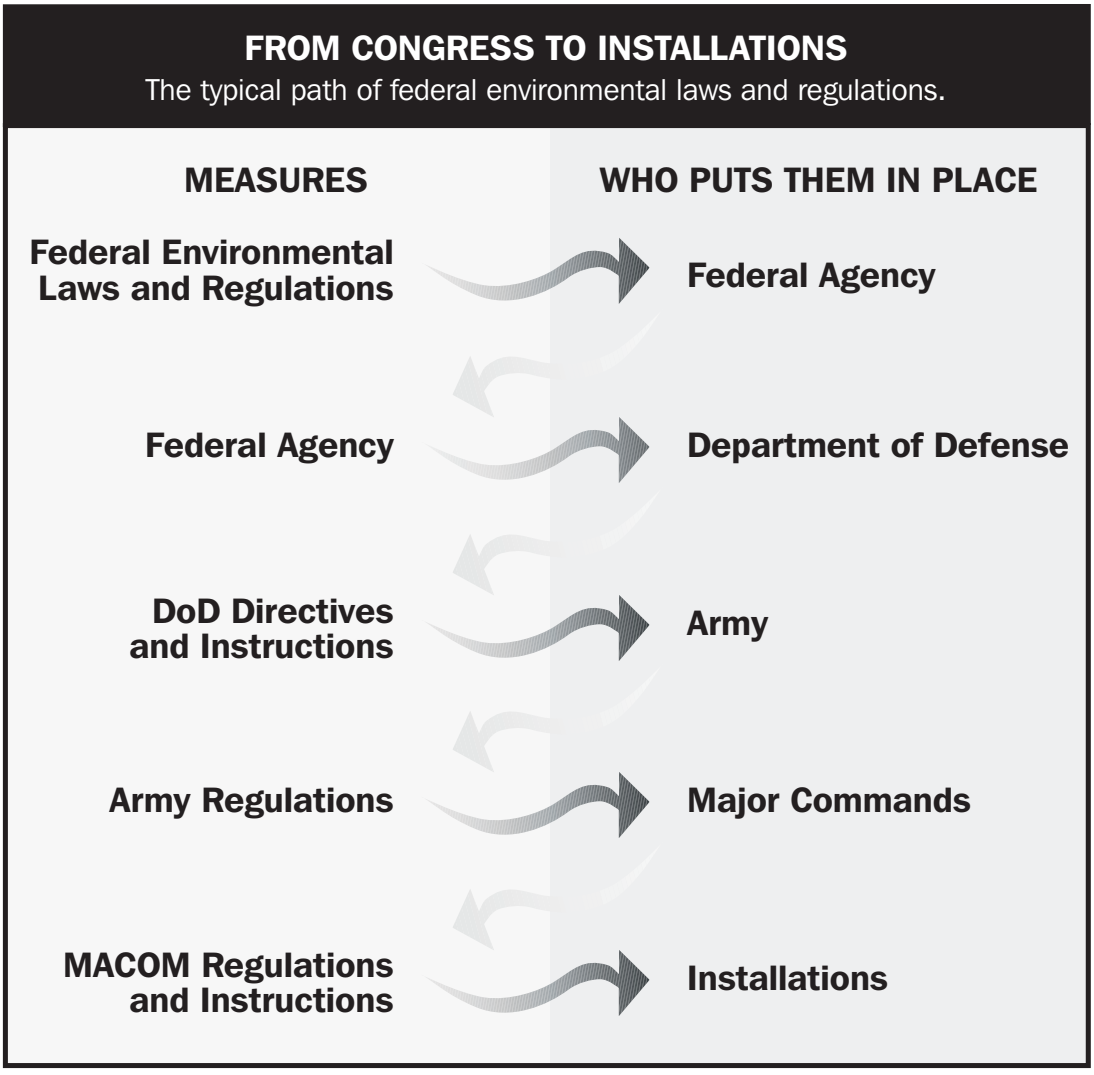
Environmental regulations affect virtually every installation operation. Commanders are responsible for making sure that environmental impacts are considered in the decision-making process.

Commanders can expect requirements for environmental compliance to increase in complexity. The federal government must comply with more than 40 environmental statutes and amendments, 34 of which have been passed by Congress within the past 25 years. Through the turn of the century, reauthorization of existing laws and passage of new ones to address emerging environmental protection issues are expected to increase.

Federal environmental laws are implemented through regulations frequently promulgated by the U.S. Environmental Protection Agency (EPA). Other agencies such as the U.S. Fish and Wildlife Service (FWS) and the Advisory Council on Historic Preservation (ACHP) regulate endangered species and historical and archeological resources, respectively. Department of Defense (DoD) directives and Army Regulations (ARs) implement many federal environmental regulations at the major command and installation levels.

FROM CONGRESS TO INSTALLATIONS

The typical path of federal environmental laws and regulations.



Laws You Need to Know

Most federal environmental regulations are promulgated in response to legislation passed by Congress. Principal environmental legislation of the past two decades includes:

Public Law

Clean Air Act (CAA) provides requirements to prevent or control air pollution from stationary and mobile sources; includes provisions for control of air toxins, acid rain, chloroflourocarbons (CFCs) and halons. Provides for a national air quality permit program and increased enforcement (civil and criminal).

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requires the licensing or registration of pesticide products; requires proper management of pesticide use, storage, and disposal.

Safe Drinking Water Act (SDWA) regulates drinking water quality for pollutants that may harm human health or negatively affect the aesthetic quality of drinking water.

Endangered Species Act (ESA) requires that actions of federal agencies do not jeopardize the existence of threatened or endangered species or harm critical habitats of these species.

National Historic Preservation Act (NHPA) requires federal agencies to consider effects of their actions (such as construction, leasing or land transactions) on cultural and historic resources. Section 110 of the NHPA requires federal agencies to develop a program to locate, identify and evaluate historic properties on federal lands, and nominate said sites for listing in the National Register of Historic Places.

Archeological Resources Protection Act (ARPA) requires a permit for anyone investigating archeological resources on federal lands. Installation law enforcement personnel should be aware of archeological resources that need protection, and such sites should be monitored regularly.

Native American Graves Protection and Repatriation Act (NAGPRA) requires that federal agencies summarize and inventory any archeological collections that may contain certain cultural items and human remains. NAGPRA also requires information to be distributed to culturally affiliated, federally recognized Native American tribes, Alaskan Native villages and corporations or Native Hawaiian organizations; expeditious response to requests for return of NAGPRA materials from said groups; and consultation with these groups prior to excavation of human remains or cultural items. Discovery of human remains or cultural items calls for stopping the activity in the discovery area for 30 days and notifying the affiliated Native American group.

American Indian Religious Freedom Act (AIRFA) establishes a policy of protecting Native American religious practices and grants access to sacred sites on federal lands.

Sikes Act requires military services to manage natural resources on their lands; requires the military services to carry out a natural resources conservation program, prepare and implement an Integrated Natural Resources Management Plan that is coordinated with the U.S. Fish and Wildlife Service and state wildlife agencies, and provide for public access to resources. It also authorizes cooperative agreements for natural resources management.

Clean Water Act (CWA) regulates discharge of wastewater from any point source including industrial facilities and sewage treatment facilities; requires reporting and cleanup of oil and hazardous substance spills in waterways; also protects waterways.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as the "Superfund" law, guides the cleanup of leaking hazardous waste disposal sites. It also makes persons (including businesses and federal facilities) responsible for hazardous substance releases liable for cleanup of those releases and restitution costs. Amended by the Superfund Amendments Reauthorization Act (SARA); the Emergency Planning and Community Right-to-Know Act (EPCRA) is part of SARA Title III.

Resource Conservation and Recovery Act (RCRA) establishes guidelines and standards for hazardous waste generation, transportation, treatment, storage and disposal.

Toxic Substances Control Act (TSCA) regulates, among others, polychlorinated biphenyls (PCBs), chlorofluorocarbons (CFCs) and asbestos. Also requires testing of chemical substances entering the environment, regulating releases where necessary.

Noise Control Act establishes a national policy to promote an environment free from noise that jeopardizes health and welfare, and regulates noise emissions from commercial products such as transportation and construction equipment.

Executive Directives

Executive Order 11990, "Protection of Wetlands," encourages installation commanders to provide leadership and act to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. According to the order, installation commanders shall strive to achieve no net loss of values and functions of installation wetlands.

Executive Order 12088, "Federal Compliance with Pollution Control Standards," is the critical link between federal environmental regulations and federal facilities. The order mandates that federal facilities control and monitor pollution according to federal

regulations. It also established the A-106 reporting process (now known in the Army as the Environmental Program Requirements (EPR) report). The EPA document "Federal Facilities Compliance Strategy," also known as the EPA Yellow Book, establishes a comprehensive and proactive approach for federal facilities' compliance with these federal regulations. This order has specific applicability outside the United States.

Executive Order 12114 addresses the environmental effects of major federal actions abroad. The order establishes internal procedures for federal agencies to consider the significant effects of their actions on the environment outside the United States. The State Department coordinates all interaction between federal agencies and foreign governments. This program aims to provide information to decision makers, increase awareness and interest in environmental concerns and encourage environmental cooperation with foreign nations.

Executive Order 12856, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements," is designed to help installation commanders and other federal facility managers understand and reduce hazardous materials use at their installations. The order requires that federal facilities comply with the reporting requirements of the Emergency Planning and Community Right-to-Know Act; prepare written Pollution Prevention Plans; reduce toxic chemical releases by 50 percent between 1994 and 1999; and identify and eliminate hazardous material requirements in technical documentation. The order also required federal agencies to develop pollution prevention strategies by the end of 1995.

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," dated February 11, 1994.

Executive Order 13007, "Indian Sacred Sites," requires installation commanders to accommodate access to sacred sites by Indian groups, to the extent practicable, and to avoid adversely affecting the physical integrity of such sites.

Presidential Memorandum "Government-to-Government Relations" directs heads of executive departments and agencies to operate within a government-to-government relationship with federally recognized tribal governments, and to consult with tribal governments, to the greatest extent practicable, before taking actions that affect federally recognized tribal governments. This involves treating tribal representatives as agents of a sovereign entity, rather than as members of the interested public, and may require that agencies actively seek out tribal comment on actions that may affect the tribes, instead of relying on the standard public notice process.

State Regulations

Each state has its own regulatory organization charged with developing and implementing environmental regulations. Where federal sovereign immunity has been waived, state laws and their implementing regulations may apply to federal installations. When the EPA approves a state's program, the state has "primacy" for that particular program.

Many state regulations parallel federal environmental regulations; some are more stringent. This Guide is not large enough to summarize all state regulations. It is your responsibility to ensure that your installation's environmental staff stays abreast of, and in compliance with, federal, state, and any applicable local or host-nation regulations. Contact your Army Regional Environmental Office for assistance.

Army Regulations

The Army has developed environmental regulations that prescribe policies, responses and procedures to promote stewardship, protect military readiness and enhance quality of life. Although many of these regulations are similar to EPA regulations, several requirements are more stringent than those of the EPA. Many Army environmental regulations are contained in AR 200-1, "Environmental Protection and Enhancement," which addresses the following major areas:

- Water Resources
- Oil and Hazardous Substances Spills
- Hazardous Materials Management
- Hazardous and Solid Waste Management
- Air Programs
- Environmental Noise Management Programs
- Asbestos Management
- Radon Reduction Program
- Pollution Prevention
- Environmental Restoration Programs
- Environmental Quality Technology Program
- Automated Environmental Management Systems
- Army Environmental Program in Foreign Countries
- Other Environmental Programs, including:
  - National Environmental Policy Act (NEPA) Requirements
  - Natural Resources Management
  - Cultural Resources Management
  - Natural Resource Damage Assessment (NRDA)
  - Real Property Acquisition, Outgrant and Disposal Transactions
  - Environmental Agreements
  - Environmental Compliance Assessments
  - The Consolidated Army Military Awards Program
  - Environmental Quality Control Committee (EQCC)
  - Army Environmental Training Program
  - Installation/State Environmental Training Plans
  - National Security Emergencies and Exemptions
  - Integrated Training Area Management (ITAM)
  - Pest Management Program

AR 200-1 also states installation commanders' general environmental responsibilities, such as:

- Establish a structure to plan and execute environmental programs.
- Integrate environmental and cultural protection into the execution of the command's basic mission.
- Cooperate with regulators to maintain environmental compliance.
- Provide regulators access to facilities to monitor compliance.
- Report indications of environmental crises immediately through the command channels to the Office of the Director of Environmental Programs.
- Conduct a public affairs program to support the Army's environmental program.

OTHER ARs ALSO ADDRESS SPECIFIC PROGRAMS THAT IMPACT ENVIRONMENTAL MANAGEMENT:

Army environmental regulations are being transitioned into the 200 series, specifically ARs 200-1 through 200-5. However, some supporting ARs will remain in the 420 series (ARs 420-40, -49 and -76).

AR 200-2, "Environmental Effects of Army Actions," sets forth policy, responsibilities, and procedures for integrating environmental considerations into Army planning and decision making in accordance with the requirements of the National Environmental Policy Act (NEPA). It lists the types of actions or projects that must be evaluated for their potential environmental impacts and the criteria for determining which type of environmental documentation is appropriate.

AR 200-3, "Natural Resources — Land, Forest and Wildlife Management," sets forth policy and guidance for the management and maintenance of all lands under Army control. This includes the soils, vegetation, fish, wildlife, endangered species, and forests which are used for mission, recreation, timber production, agricultural leasing, and other purposes which are in the Army's or public's interest.

AR 200-4, "Cultural Resources Management," prescribes Army policy on cultural resources management and guidance for the treatment of historic properties, including any significant prehistoric or historic district, site, building, structure or object on Army controlled property. It also defines requirements for development of an Integrated Cultural Resource Management Plan (ICRMP) that details installation procedures for integrating cultural resources management with mission requirements.

AR 200-5, "Pest Management" (transitioning from AR 420-76), provides policies, standards and procedures for pest control activities on Army installations. It requires preparation and annual updating of an Integrated Pest Management Plan (IPMP) that lists all program objectives according to the potential or actual impact on health, morale, structures or property.

AR 350-xx, "Integrated Training Area Management (ITAM)," sets forth the objectives, responsibilities and policies for the ITAM program. ITAM establishes procedures to achieve optimum, sustainable use of training lands by implementing a uniform land management program and includes inventorying and monitoring land condition, integrating training requirements with land carrying capacity, educating land users to minimize adverse impacts, and providing for training land rehabilitation and maintenance.

WHAT ARE MY LIABILITIES?

Improper environmental management carries potential civil and criminal penalties. Because commanders are ultimately responsible for compliance, you should familiarize yourself with the laws.

VARIOUS FEDERAL ENVIRONMENTAL STATUTES PROVIDE CIVIL AND CRIMINAL PENALTIES FOR VIOLATIONS, INCLUDING:

- Hazardous Materials Transportation Act
- Occupational Safety and Health Act
- Clean Air Act
- Toxic Substances Control Act
- Resource Conservation and Recovery Act
- Safe Drinking Water Act
- Comprehensive Environmental Response, Compensation, and Liability Act
- Superfund Amendments and Reauthorization Act
- Endangered Species Act
- Clean Water Act
- Archeological Resources Protection Act

The maximum penalties vary by statute but include fines ranging from $10,000 to $25,000 per day of violation and imprisonment from 1 year to 15 years. Under some circumstances, installations and personnel can be subject to enforcement actions in state courts for violation of state environmental laws. A civil enforcement action may also be possible; a civil enforcement action could affect your installation's public image and its budget.

As commander, direct participation in the violation of an environmental statute is but one theory of liability that could subject you to prosecution in a federal or state court. By not acting promptly to correct an environmental violation, you may also be subject to prosecution even though you have no direct involvement in the violation. If violations of the law do occur, inform the appropriate regulatory authorities immediately and engage in good faith efforts to come into compliance.

Consult with your command or staff judge advocate for more information on potential criminal conduct and liabilities.

How Can I Prepare for a Regulatory Environmental Inspection?

Because regulators often give little or no advance notice of an inspection, your installation should be ready at all times. Here are some measures to help your installation prepare for a regulatory environmental compliance inspection.

Day-to-Day Preparation

- Regulatory training and associated records usually are the first areas checked. Records need to be current and appropriate personnel trained (so these areas need emphasis and focus).
- The annual Installation Status Report (ISR) Part II can help you target areas of potential interest to regulators.
- The Environmental Compliance Assessment System (ECAS) identifies regulatory deficiencies and corrective actions, offers potential remedies and provides cost estimates for those remedies. Assessments are conducted annually and should be current.
- Regulators always go back and check previous violators and violations to determine progress or compliance. A system should be in place to track and account for corrective actions of previous environmental non-compliance.
- The environmental office should perform internal "staff assistance" visits at least annually or provide such internal inspections on request. As part of ECAS, the installation should perform "internal assessments" that evaluate the performance of the operation in accordance with federal and state environmental regulatory requirements. Each internal assessment should produce a Installation Corrective Action Plan (ICAP), which lists corrective actions taken for any regulatory deficiencies at that site. Internal assessments are similar to inspections or audits and should prepare the installation for regulatory inspections.

Ensure that pertinent records and files are available and easily accessible to the inspection team. Records and files must be legible and ready for review. Develop record and file indices and arrange contents chronologically. Copies of previous inspection reports also should be readily available.

- Establish environmental points-of-contact for all installation activities, down to the unit level. These "POCs" should be trained to adequately address their activity's environmental compliance issues and they should develop good working relationships with the installation environmental office.

- The installation's Environmental Quality Control Committee (EQCC) should meet regularly and frequently. Its meetings should be well attended.

- Use installation communications to enhance the installation community's environmental awareness and ethic. Television, radio, newspapers and other media can be used in addition to commander's policy letters or statements on environmental compliance, stewardship and quality of life.

- Consider issuing an installation regulation that addresses all issues related to environmental programs, with specific emphasis on the installation's environmental uniqueness.

- The Department of Defense's Regional Environmental Offices (REOs) can help installations and major commands coordinate and resolve environmental issues with state and federal regulatory agencies. (Read the sections on REOs and "Where Do I Go For Help?" for more information.)

Organizing for a Regulatory Inspection

Whether or not they announce the inspection, regulators have the legal right to conduct compliance inspections of DoD facilities. Some recommendations for handling a regulatory environmental compliance inspection are:

- If time permits, distribute a regulatory inspection "notification letter," signed by the installation commander, that:

    - Includes authorization from the commander for full cooperation and open response to the inspection team.

    - Identifies who, what, when, where, and how.

    - Is distributed as soon as practical before the regulatory inspection and includes pertinent activities both directly and indirectly involved with environmental operations (such as DEH/DPW, DRMO, DOL, Safety, Supply, PAO, IHPO, O&M, MWR, SJA, and Preventive Medicine).

    - References potential impacts of the inspection (such as NOVs, fines and publicity).

- Organize and maintain impeccable environmental records and files. Focus on:
  - Hazardous Waste Management Plans/SOPs
  - Spill Plans/SOPs
  - Waste Analysis Plan/SOP
  - Closure Plans
  - Manifests
  - Weekly Inspections
  - Training Records and Plans
  - Waste Management Contracts
  - Safety and Security Plans
  - Land Disposal Restriction Forms
  - Permits and Permit Applications
  - Turn-In Records (DRMO)
  - Integrated Natural Resource Plans
  - Integrated Pest Management Plans
  - Integrated Cultural Resources Plans
  - State and Local Record-keeping Requirements
- Ask regulators to brief you or your designated representative upon entering the installation. Legal representatives (SJA) should attend.
- During the in-brief, agreements will be reached on units and activities to be inspected. As soon as possible, these units must be notified of the time and entry location. Quick notification allows the appropriate POC to answer questions which, left unanswered, typically lead to findings of non-compliance.
- Representatives from the environmental office should escort the regulators throughout the inspection. Choose escorts based on their knowledge of the activities being inspected and of the relevant environmental regulations, as well as their communication and "person-to-person" skills.

ESCORTS FOR THE REGULATORS WILL HELP:

- Inspectors locate the activity to be inspected.
- Inspectors contact the activity's environmental POC.
- Obtain answers to inspector questions that are unanswered during the on-site facility inspection.
- Ensure that a positive posture of the installation is obtained through chronicling environmental success stories at the installation.

REGULATORY INSPECTION ADVICE

DO

- Notify the chain-of-command that regulators are on-site.
- Insist upon an in-brief and an out-brief with the installation commander or a designated representative.
- Ensure that a member of the installation's supporting environmental office is present during every phase of the inspection. They can answer technical environmental questions or deal with issues that the activity POC is unsure of.
- Politely ask inspectors for their credentials and the purpose of the visit (especially if an inspector is from a division that performs criminal investigations).
- Establish the parameters of the inspection during an opening conference.
- Keep a log and a separate copy for the installation of all documents provided to inspectors.
- Take detailed notes during the inspection.
- Obtain a copy of any form the investigator uses.
- Request a copy of the inspector's report.
- Mark confidential documents as such and inform the inspector of their confidential nature.
- Ensure that all questions asked by regulators during an inspection are answered by the appointed POC or an alternate.
- Treat regulators in a courteous, professional manner throughout an inspection.
- Provide maximum assistance to regulators in obtaining documentation requested, such as training records, manifests, DD1348-1s, and Material Safety Data Sheets.
- Request assistance from regulators on technical issues and concerns; they are a source of specialized information and expertise that may help resolve environmental compliance concerns.
- Keep in mind that regulators have different interests and objectives.
- Conduct status meetings after each day to review findings and plan for the next day.
- Maintain open communication with regulatory agencies (establish a proactive relationship).

DON'T

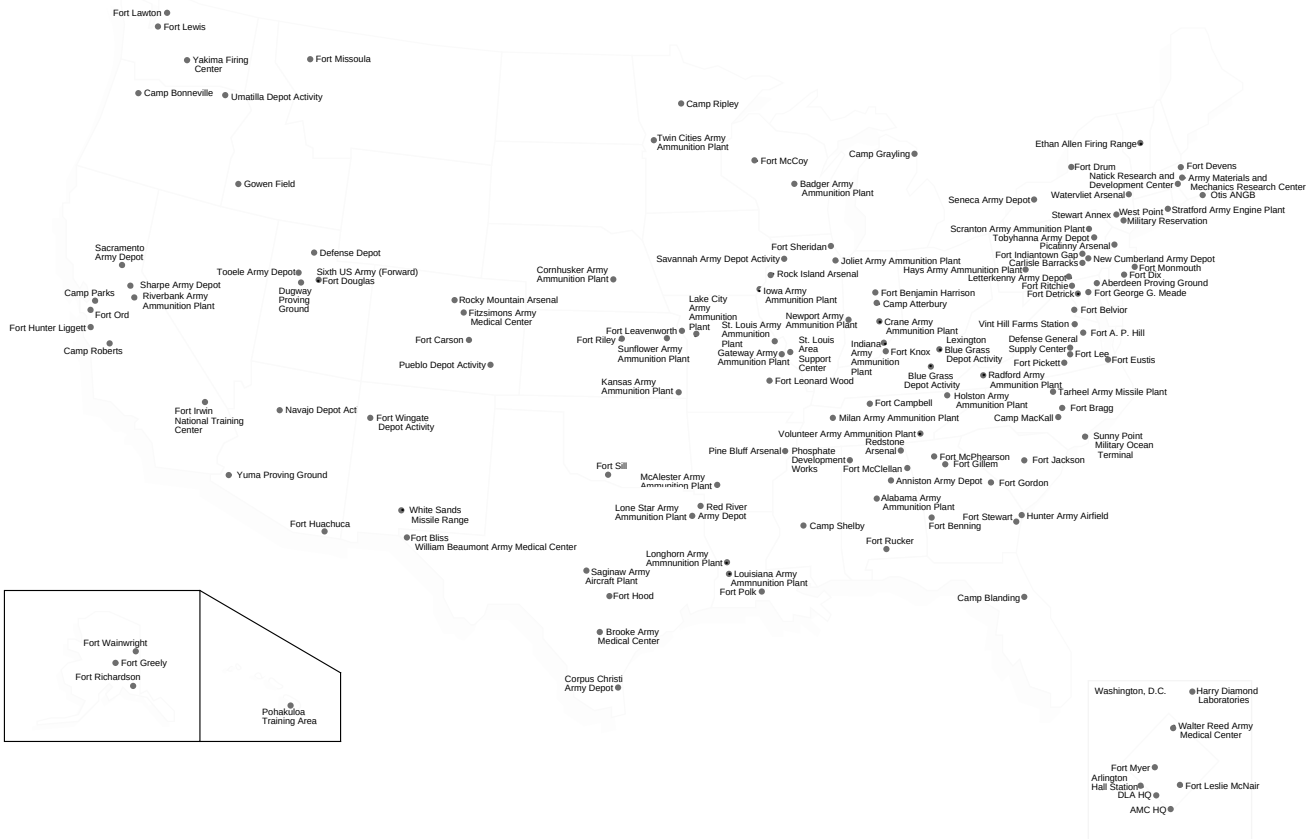
- Lie, conceal or destroy documents.
- Argue with regulators.
- Volunteer unnecessary or unsolicited information.
- Try to answer questions if you don't know the answer; tell the regulators that you don't know but will get the information for them.
- Try to hide areas of non-compliance.
- Point out areas of concern that may exist but are not addressed, questioned, or asked about.

Inspection Areas of High Probability for Regulatory Scrutiny

With implementation of the Federal Facility Compliance Act, state or federal regulators may inspect an installation annually. With the increasing number of fines levied against federal facilities for non-compliance, it is important to review environmental compliance evaluation checklists. If the installation addresses the issues on these checklists properly, and prepares its activities accordingly, it should pass inspections easily.

The sample checklist opposite includes only RCRA issues. You should have checklists that identify potential major violations of all environmental regulations, including those on air, water, pollution prevention, and natural and cultural resources. These can be developed from Environmental Compliance Assessment System (ECAS) and Installation Status Report (ISR) Part II assessments and surveys, previous regulatory inspections, and state and local priorities.

Major Army Installations



AREAS OF HIGH PROBABILITY FOR REGULATORY SCRUTINY UNDER RCRA

1. Has the facility received a U.S. Environmental Protection Agency (EPA) Identification Number?
2. Has the generator determined that certain wastes are a hazardous waste?
3. Has the generator notified the EPA of their waste activities?
4. Are containers marked with the words "hazardous waste" or with other words that identify the contents of the containers?
5. Are containers holding the hazardous waste in good condition and safe to handle?
6. Are contents of the containers compatible with the container, i.e., acid in metal drum?
7. Are containers holding hazardous waste closed except when adding or removing waste?
8. Are containers handled in a manner to prevent damage, rupture, or leaks?
9. Are containers marked with the accumulation start date?
10. Is hazardous waste stored on-site longer than 90 days? (Generator status only.)
11. Is generator accumulating more than 55 gallons of hazardous waste or one quart of acutely hazardous waste in containers at or near the point of generation?
12. Are manifests prepared for each shipment of hazardous waste sent off-site for transportation, treatment, or storage?
13. Have facility personnel successfully completed required training?
14. Are container storage areas inspected at required intervals?
15. Are containers containing ignitable or reactive waste stored at least 15 meters (50 feet) from the facility's property line?
16. Has the owner or operator of the facility developed a means to control entry or access to the facility where waste is stored?
17. Is the facility operated in a manner to minimize the possibility of fire, explosion, or release of hazardous waste or other hazardous constituents?
18. Is adequate aisle space maintained to allow unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment?
19. Does the facility have an Emergency Preparedness and Contingency Plan?
20. Do personnel have immediate access to an internal alarm or emergency communications device?
21. Are records, including plans, made available within a reasonable time for inspection?

NOTE: *Based on Title 40 CFR Parts 261, 262 and 265; EPA Form 8700-12, "Notification of Regulated Waste Activity"; and Title 29 CFR Parts 1910 and 1926. The provisions of 40 CFR 262.34 apply to the on-site accumulation of hazardous waste by generators (less than 90-day storage facility). A generator that treats, stores or disposes of hazardous waste on-site must comply with the applicable standards and permit requirements set forth in 40 CFR, parts 264, 265, 266, 268, and 270.*

National Environmental Policy Act of 1969

The National Environmental Policy Act of 1969 (NEPA) affects virtually every proposed action on the installation. Army Regulation 200-2, "Environmental Effects of Army Actions," is the Army's implementing regulation for NEPA.

Any Army action may be subject to NEPA requirements, including: training; weapon system testing; operations or transit; construction or demolition; and mission shifts.

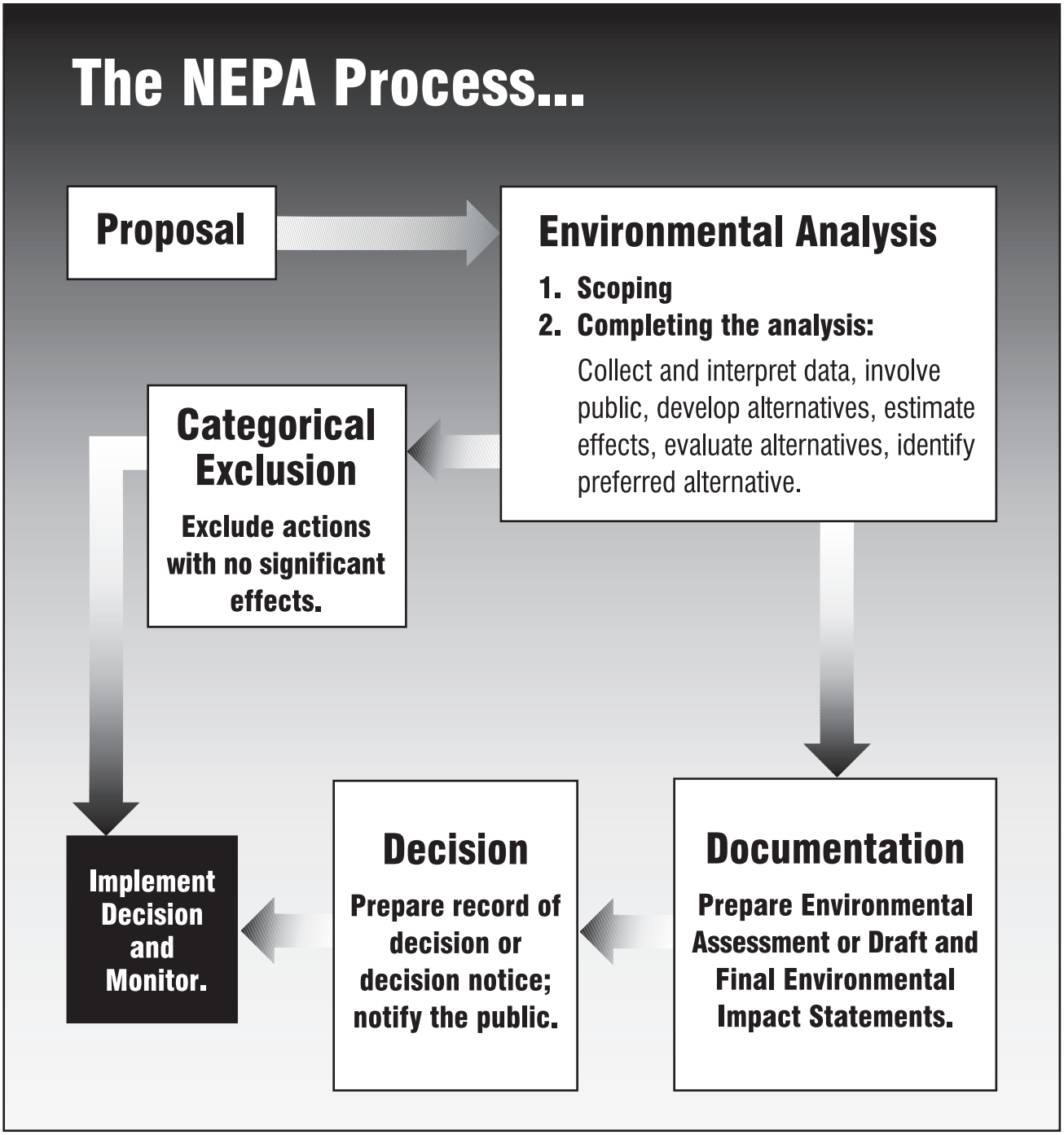
What Is It?

NEPA is our national charter for the protection of the environment. It contains "action-forcing provisions" that require federal agencies to consider the environmental impacts of their actions before they are implemented, document those considerations, and involve the public in their planning process. Executive Order 12114 establishes procedures for consideration, by federal agencies, of the environmental effects of major federal actions outside the United States.

Current Regulations

Responsibility of issuing and implementing NEPA regulations belongs to the Council on Environmental Quality (CEQ). This following chart depicts the NEPA process.

> ***"NEPA says the federal government will promote the general welfare, create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans."***


The NEPA Process...
Proposal
Environmental Analysis
1. Scoping
2. Completing the analysis:
Collect and interpret data, involve public, develop alternatives, estimate effects, evaluate alternatives, identify preferred alternative.
Categorical Exclusion
Exclude actions with no significant effects.
Implement Decision and Monitor.
Decision
Prepare record of decision or decision notice; notify the public.
Documentation
Prepare Environmental Assessment or Draft and Final Environmental Impact Statements.

The Army's Program

Objectives . . .

- Integrate environmental considerations into the decision-making process.
- Match military mission activities with the ecological compatibility of the land and natural resources.
- Identify and plan for environmental requirements that will apply to mission activities (helps avoid mission delays).

Commanders Should . . .

- Monitor proposed actions and ensure that appropriate environmental documentation is prepared.
- Consider environmental impacts of alternatives before making a decision.
- Ensure adequate implementation of adopted mitigation measures.
- Provide the public and interested agencies with adequate opportunity to participate in the planning process and environmental analysis.

References

AR 200-2, "Environmental Effects of Army Actions."

40 CFR (Code of Federal Regulations) Parts 1500-1508, Council on Environmental Quality Regulations.

Resourcing, Documenting and Reporting

Army installations are required to report environmental status information to HQDA. In turn, this information supports decision-making at headquarters and is used to report to DoD and Congress. Some major reporting requirements include:

Environmental Quality Report (EQR)

Formerly the Army Compliance Tracking System (ACTS), the EQR is a Web-based program that conveys information on the Army's environmental status to senior Army leadership, DoD, and Congress. Its primary focus is to track Army compliance with environmental laws for multi-media through Enforcement Actions (ENFs), Inspections, and Fines and Penalties on a quarterly basis. Primary reports using this data are the Quarterly Army Performance Review (to SECARMY) and the semi-annual DoD Environmental Quality IPR (to the Deputy Under Secretary of Defense for Environmental Security), the fall IPR being the Army's input to the DoD Environmental Quality Report to Congress (RCS-1997). The EQR data calls in the fall and spring include requirements for additional data required by other reports that HQDA submits (some of which are described in other sections below).

Submission to HQDA:
15 November ▪ 15 February ▪ 15 May ▪ 15 August.
Submission to SECARMY: December ▪ March ▪ June ▪ September.
Submission to OSD: December ▪ June.

Installation Status Report (ISR) Part II (Environment)

The goals of ISR Part II are to capture macro-level status of an installation's environmental program and improve the justification and prioritization of limited resources. Part II's objectives are to assess installation environmental compliance, summarize environmental conditions, measure mission impacts, and assess the effectiveness of environmental program performance.

The Chief of Staff, Army (CSA), directed the implementation of ISR Part II (Environment) on October 2, 1995. As part of the readiness review for the CSA, the Assistant Chief of Staff for Installation Management (ACSIM) reports ISR Part II results. Analysis of ISR data should assist commanders at all levels to improve installation conditions and ultimately the readiness of forces that our installations support.

Submission to HQDA: 15 May.

Defense Site Environmental Restoration Tracking System (DSERTS)

DSERTS is an automated method to manage and track the environmental restoration process at installations and site/Formerly Used Defense Site (FUDS) projects. The Superfund Amendments and Reauthorization Act (SARA), as amended in November 1993, requires an annual report to Congress on the progress of environmental restoration activities at military installations. DSERTS enables installations to submit reports to higher headquarters and is the principle source of information for the Environmental Restoration Annual Report to Congress.

Submission to HQDA: November/March.
Submission to OSD: November.

Annual Reforestation Report

The U.S. Forest Service (USFS) annually requests information from the Army on the number of acres that have been reforested. From the data it receives, USFS compiles a national report on federal reforestation, categorized by state. Although there is no legal requirement for this report, federal agencies comply with the request as a land management responsibility. The data for this report is collected in surveys defined in the fall EQR data call.

Submission to HQDA: November.
Submission to USFS: January.

Environmental Program Requirements (EPR) (replaces 1383)

The EPR report serves as a source document in programming, budgeting, and allocating resources needed to execute the Army Environmental Program. It is used to show past accomplishments and expenditures; to indicate the status of current projects; to refine and validate requirements for budget year; to support planning, programming, and budgeting for the outyears; and to build the Program Objective Memorandum (POM). In addition, EPR data is used for congressionally-mandated lists of funded projects that are part of the DoD Environmental Quality Report to Congress.

Submission to HQDA:
December (mandatory) ▪ May (voluntary).
Submission to OSD: February.

Resource Conservation Recovery Act (RCRA) 3016

The RCRA 3016 report is an inventory of RCRA-required hazardous waste activities on federal property. Each federal agency must compile, publish and submit to the EPA an inventory of sites that it owns or operates (or has owned and operated) at which hazardous waste is or was stored, treated or disposed of. In the case of sites in states with an authorized hazardous waste program this report also must be submitted to the appropriate state agency.

Submission to HQDA:
Biennial (even years) 30 January.

Secretary of Interior's Report to Congress on Federal Archeological Activities

The Secretary of Interior's Report to Congress on Federal Archeological Activities is mandated through Statute 16 USC Section 470ll and the Archeological Resources Protection Act of 1979. Annually, through a standardized questionnaire, each federal agency with land management responsibilities provides information on its archeological activities during that year. The report is compiled and submitted to the Secretary of the Interior. The data for this report is collected in surveys defined in the fall EQR data call.

Submission to HQDA: November.

Annual Threatened and Endangered Species Expenditure Report

The 1988 amendments to the Endangered Species Act of 1973 require expenditures identifiable to threatened and endangered species be annually compiled by the Fish and Wildlife Service. The information is compiled by the U.S. Army Environmental Center (USAEC), forwarded to the Office of the Director of Environmental Programs (ODEP), the Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health (DASA(ESOH)), DoD, and then to the Secretary of the Interior.

Submission to HQDA: December.
Submission to OSD: January.

Emergency Planning and Community Right-to-Know Act (EPCRA) Toxics Release Inventory (TRI) Report

Executive Order 12856 requires all federal facilities to comply with EPCRA reporting requirements. Facilities must report to the EPA, states, and HQDA annual releases and transfers off-site of more than 600 toxic chemicals. The TRI sets the baseline and marks progress toward the federally mandated 50-percent reduction in toxic chemical releases and transfers.

Submission to HQDA: 1 July.
Submission to OSD: 1 September.

DoD Pesticide Management Report

Annually, DoD requests pesticide management information from the services. Army input to this report includes information on installation pesticide management plans, quantities of pesticides applied on installation property, and certification information for pesticide applicators. The data for this report is collected in surveys defined in the fall EQR data call. Transition to DESCIM pest-management software is anticipated during fiscal years 1997 and 1998.

Submission to HQDA: November.
Submission to OSD: March.

Automatic Reimbursement Authority Report

The Army manages the fiscal aspects of the forestry program using reports of proceeds and expenses to assure fiscal soundness. DFAS-IN, MACOMs and Corps of Engineers district offices have been tasked by memorandum to provide the reports.

Submission to HQDA:
15 February ▪ 15 May ▪ 15 August
(4th quarter exempted).

Budget Information for Wildlife, Fish, and Game Conservation, Military Reservations

The budget for fee collections (21X5095 account) from hunting, fishing and trapping must be reconciled and authorized. Installations had previously reported budget requests and collections in response to memoranda from HQ USACE, but this responsibility is being assumed by ACSIM.

Submission to HQDA: Biennial.

Solid Waste Annual Report

Driven by RCRA Section 6002 (d), it accompanies the Environmental Quality Report to Congress.

Submission to HQDA: November.
Submission to OSD: December.

Resourcing the ITAM Program

Integrated Training Area Management (ITAM) is the installation commander's program. The designated installation element having primary ITAM responsibility prepares and submits an annual workplan reflecting ITAM requirements, in accordance with MACOM procedures. ITAM funding requirements are not included in the EPR. The ITAM Annual Program Plan produced by the HQDA functional proponent (DAMO-TR) reflects the validated MACOM requirements and funding levels.

Submission to HQDA: March.

Air Emissions Management

What Is It?

Good air quality contributes to Army readiness and quality of life by providing direct health and economic benefits to soldiers and civilians. A commander's influence and guidance may resolve issues that could impair readiness. Commanders have occasionally had to participate in negotiations with regulators so that training could continue. In addition, the commander's authority may help overcome citizens' and regulators' concerns about air pollution from Army activities.

Examples of Sources of Air Pollution Emissions at Installations

- Boilers that produce heat and steam.
- Fueling operations, especially gasoline fueling.
- Graphic arts.
- Degreasing operations.
- Vehicle and building painting operations.
- Training activities, especially vehicle maneuver training.
- Firing ranges.
- Waste disposal, such as incineration.
- Dry-cleaning operations.
- Emergency back-up generators.

Particulate matter regulations, more than any other **Clean Air Act (CAA)** regulation, have interfered with training. Enforcement of these regulations has restricted smoke/obscurant emissions. Smoke/obscurant clouds are made up of particulate matter measuring less than 2.5 micrometers in aerodynamic diameter. Because of the large volume in which they are generated, fog oil clouds can cause violations of the particulate matter standards.

Commanders can implement programs, such as pollution prevention and automated data collection systems, that will reduce their installation's Clean Air Act compliance costs. Pollution prevention, or "P2," is the substitution of less polluting processes or materials. These new processes and materials pay for themselves by reducing material, energy, waste disposal, and environmental compliance costs.

Examples of Cost-Saving P2 Measures

Measure	Advantages
Low solvent paint	■ Decreases Clean Air Act compliance costs ■ Reduces EPCRA emissions
Reduce heater usage by increasing building and heater insulation and/or purchasing solar water heaters	■ Decrease energy costs ■ Reduce boiler pollutant emissions ■ Reduce CAA compliance costs
Stage I and II vapor control on gasoline dispensers	■ Reduces gasoline vapor emissions ■ Large source of hazardous air pollutant emissions
Aqueous parts washers	■ Reduce halogenated parts cleaner costs ■ Reduce CAA compliance costs ■ Reduce EPCRA emissions
Sputtering or vapor deposition metal plating	■ Reduces chromium emissions to air and water ■ Reduces hazardous waste disposal costs

Your environmental office should have a list of P2 opportunities specific to your installation.

The Clean Air Act requires installations to control, manage, reduce and track the volume of their air emissions. Improved data management can reduce both compliance costs and environmental fines assessed against your installation. Inadequate data collection accounts for most CAA Notices of Violation.

It isn't necessary to spend tens of thousands of dollars to collect data required by the Clean Air Act. Implementation of the Hazardous Substance Management System (HSMS) is a cost-effective way to improve data-gathering. HSMS, a "cradle to grave" automated tracking system sponsored by DESCIM, is the DoD standard for tracking hazardous materials requisitioned, received, stored, issued, used, recycled, and hazardous waste disposed. It also maintains information on all processes that use hazardous materials or generate hazardous waste, calculates chemical release information, and generates all the required federal environmental reports.

Current Regulations

The massive size and scope of the **Clean Air Act Amendments of 1990 (CAAA-90)** make clean air regulations among the most intrusive. The EPA and the states have only promulgated about half of the regulations required by these amendments.

The CAAA-90 legislation targets many operations on Army facilities. Consequently, the Army faces significant increases in the cost of doing business. Major installation impacts come from Titles I (Attainment), III (Hazardous Air Pollutants), V (Permits), VI (Stratospheric Ozone Protection) and VII (Enforcement).

TITLE I - Air Quality. Title I requires the EPA to write regulations bringing all ambient air into compliance with the National Ambient Air Quality Standards (NAAQS). These standards set the maximum allowable concentrations of ground-level ozone, carbon monoxide, sulfur dioxide, nitrogen oxides, inhalable particulate matter, and lead. It establishes a set of emissions control standards for areas of the country meeting the NAAQS, and other sets for areas failing to meet these standards. Most of Title I is directed at controlling pollutant emissions which contribute to ground-level ozone formation.

Army Impacts of Title I

- Military sources of volatile organic compounds (VOCs) typically affected by Title I include boilers, fuel storage and dispensing facilities, spray painting and coating lines, organic solvent degreasing operations, and dry cleaners.
- Affected military nitrogen oxide (NOx) sources include combustion processes, such as open burning/open detonation (OB/OD) sites, engine test cells, various waste incinerators, and fossil-fuel-fired steam/hot water boilers.
- Military inhalable particulate sources include smoke/obscurant training, boilers, OB/OD, and maneuver training.
- Major requirements include:
  - Controls on boiler emissions.
  - Use of low-solvent chemical agent resistant coating.
  - Restrictions on maneuver and smoke/obscurant training.
- New operations in non-attainment areas must demonstrate that they will not have a negative impact on the goals or purpose of the state implementation plan.

TITLE III - HAZARDOUS AIR POLLUTANTS. Title III requires the EPA to write regulations reducing emissions of hazardous air pollutants (HAPs) to the nation's air. Between November 1992 and November 2000, the EPA will write HAP control regulations for 175 classes of industrial activities, 30 of which are found on at least one Army installation. This title also establishes contingency planning for accidental releases of hazardous substances.

ARMY IMPACTS OF TITLE III

- Affected HAP sources must modify processes or install control equipment to limit emissions and comply with maximum available control technology (MACT).
- Title III requirements impact most of the VOC sources listed under Title I.
- Emission levels have to be verified in a manner acceptable to regulators and quantified by either continuous emission monitoring, stack sampling, or estimation using EPA-approved emission factors.

TITLE V - PERMITS. Under Title V, each installation meeting the EPA's definition of a major source must obtain a single permit covering all its regulated air emissions sources. Other than laboratories and administrative posts, most Army installations meet this definition.

THE TITLE V PERMIT MUST INCLUDE THE FOLLOWING INFORMATION:

Results of a regulatory review that includes all federal, state and local air emissions regulations, and a list of those that apply to the installation.

A list of all regulated sources.

A list showing the requirements of all regulations applying to these sources.

A Compliance Plan describing how the installation will achieve and maintain compliance with all applicable air emissions regulations.

A Monitoring Plan describing the monitoring and record-keeping through which the installation will verify compliance with all applicable regulations.

These permits have to be "federally enforceable." This means that the permit requirements can be enforced by the EPA, state regulatory agencies, or private citizens. An Army installation violating a federally enforceable requirement is more likely to be caught and cited than if it were to violate a state enforceable requirement.

Army Impacts of Title V

- Army installations must pay annual permit fees based on the level of air pollutants permitted.
- Data collection required under Title V permits consumes more of an installation staff's time than any other Clean Air Act regulation.
- Failure to comply with any aspect of the Compliance Plan or permit can be grounds for enforcement action.

TITLE VI - Stratospheric Ozone Protection. Title VI bans the production of all ozone-depleting substances (ODS) after 2001, including chlorofluorocarbons (CFCs), halons and other halogenated solvents. It also requires training for the technicians who work on machines that capture and recycle ozone-depleting chemicals (ODCs) from systems that use ODCs.

Army Impacts of Title VI

- Army installations eventually will have to replace systems, such as air conditioners, chillers, fire suppression systems, and precision metal parts cleaning, that use these chemicals.
- The Army operates a few systems, such as armored vehicle fire suppression systems, using ozone-depleting chemicals for which there are no suitable replacements.
- The Army Acquisition Pollution Prevention Support Office (AAPPSO) is responsible for supplying essential systems with ozone-depleting chemicals.

TITLE VII - Enforcement. Title VII describes civil and criminal penalties for violations of air pollution control requirements. Some violations that were previously misdemeanors are now felonies, with liability targeted at senior management rather than operators. Enforcement actions include high maximum fines and prison terms.

Army Impacts of Title VII

- Failure to comply with either administrative or substantive air quality requirements may be costly. The EPA may write "traffic tickets" assessing penalties of up to $5,000 per violation during a routine inspection.
- Administrative violations such as inaccurate or out-of-date permit data are also grounds for enforcement action.
- Enforcement efforts are specifically directed at management to compel regulated entities to plan ahead and allocate appropriate resources.
- Lack of "hands on" involvement is no longer a valid defense for a violation.

To a lesser extent, Titles II (Mobile Sources) and IV (Acid Rain) of the Clean Air Act also may affect Army operations.

TITLE II - Mobile Sources. Title II regulates pollutant emissions from non-tactical vehicle engines.

TITLE II:

Sets pollutant limits for motor vehicle exhaust emissions.

Requires manufacturers to investigate feasibility of onboard canisters to control refueling emissions.

Compels automobile manufacturers to limit carbon monoxide, hydrocarbon, and NOx emissions by improving design standards.

Requires reformulated and oxygenated gasoline in cities with the worst ozone and carbon monoxide non-attainment.

In non-attainment areas, requires that a percentage of each non-tactical vehicle fleet (such as GSA motor pools) be clean-fuel vehicles.

ARMY IMPACTS OF TITLE II

- As of the 1998 model year, Army installations in affected non-attainment areas must begin to procure and use clean-fuel vehicles. Clean alternative fuels include methanol, ethanol, reformulated gasoline, natural gas, liquefied petroleum gas and electricity.
- Non-tactical fleet vehicles used in non-attainment areas must be included in Inspection and Maintenance (I & M) programs. Such programs generally have an annual inspection requirement which can be enforced through denial of vehicle registrations.
- Army installations also may be required to implement a program to verify I&M participation for employees' privately owned vehicles.

TITLE IV - ACID RAIN. Title IV primarily affects large electric utility companies with sulfur dioxide emissions, which are considered to be a major sources of acid rain precursors.

ARMY IMPACTS OF TITLE IV

- Because acid rain is a major environmental issue in the United States, Canada and several other regions around the world, it is an environmental security issue.
- Acidification of lakes, destruction of forests, and increased weathering of exposed materials are some of the direct effects of these pollutants on Army installations. These can influence an installation's training lands, conservation programs and overall readiness.
- Electricity costs also may increase gradually over the next two decades.

STATE REGULATIONS

State agencies have a major role in managing air quality programs. State regulations applicable to installation activities are often more detailed and encompassing than federal regulations. Facets of state involvement in air pollution management include development of State Implementation Plans (SIPs), permitting of stationary sources, air toxins emissions regulations, and vehicle I & M programs.

The Army's Program

Objectives . . .

- Identify, inventory and monitor air pollutant emissions and ambient air quality.
- Reduce pollutants to regulatory levels to protect health and reduce permit costs.
- Implement HSMS.
- Procure control equipment that meets regulatory standards.
- Ensure design and operation of military equipment are in accordance with regulations.

Commanders Should . . .

- Verify, identify, monitor, and maintain an up-to-date inventory of emission sources.
- Obtain permits and provide reports for emission sources as required by regulations.
- Participate in the air pollution regulatory development process.
- Implement low-cost pollution prevention systems, and discourage institutional resistance to change.
- Maintain programs to train air emissions management personnel.
- Conduct motor vehicle I&M to ensure regulatory compliance.
- Implement pollution prevention measures that reduce environmental compliance costs.
- Ensure that Department of Logistics and Department of Public Works personnel collect material-use data required by the Title V permit.
- Confirm that installation environmental staff know state air-quality and emissions regulations.
- Notify their MACOM immediately whenever a Notice of Violation (NOV) is received.

References

AR 200-1, "Environmental Protection and Enhancement," February 1997.

AR 420-49, "Facilities Engineering Utilities Services Guide," April 1997.

DoD Directive 6050.9, "Chlorofluorocarbons (CFCs) and Halons," February 1989.

The Clean Air Act regulations are presented in Title 40 CFR, Parts 50-87.

AR 40-5, "Preventive Medicine," August 1986.

USAEHA Report, "Summary of the Clean Air Act Amendments of 1990," Titles I, II, III, V, VI, and VII, April 1991.

Asbestos

What Is It?

Asbestos is the name for a group of natural minerals that separate into strong, fine, heat-resistant fibers. It has been used in a variety of forms for thermal, acoustical and decorative purposes, boiler and pipe insulation, and in construction materials and appliances.

When asbestos degrades into microscopic fibers it becomes a health hazard. This can happen when asbestos-containing materials are disturbed. Degraded or crumbled asbestos is known as "friable" asbestos. Once emitted to the atmosphere, asbestos fibers can remain suspended in the air for long periods of time and, when inhaled, can easily lodge in body tissues. Asbestos fibers cause asbestosis, a chronic disease of the lungs which makes breathing progressively more difficult, and mesothelioma, a cancer of the chest and abdominal membranes. Other cancers, primarily of the digestive tract and lungs, also have been associated with exposure to asbestos.

Current Regulations

Several federal agencies are charged with regulating asbestos products and wastes.

- The Occupational Safety and Health Administration (OSHA) sets limits for worker exposure on the job.
- The Consumer Product Safety Commission (CPSC) regulates asbestos in consumer products and has banned the use of asbestos in dry-wall patching compounds, ceramic logs and clothing.
- The Environmental Protection Agency (EPA) regulates the management and disposal of asbestos-containing wastes and has set deadlines for elimination of asbestos in certain products such as water distribution pipes and building products.

Through National Emissions Standards for Hazardous Air Pollutants (NESHAP), the EPA requires prework notices and specific work practices to be used during demolition and renovation operations when asbestos materials are involved. In addition, the **Asbestos Hazard Emergency Response Act,** signed into law on October 22, 1986 (and last amended in November 1990), requires the EPA to study the risk to human health posed by asbestos in public and commercial buildings and the means to respond to any such risk. Buildings most likely to contain friable asbestos are those built or remodeled between 1945 and 1978.

The **Hazardous Materials Transportation Act** was amended in 1978 to regulate the transport of asbestos materials. These regulations are contained in 49 CFR (Code of Federal Regulations) Parts 172-177. Asbestos

must be loaded, handled, and unloaded in a manner that minimizes occupational exposure to airborne asbestos.

Many states and local governments have enacted standards more stringent than the federal requirements for certifying asbestos workers and disposing of asbestos waste. Contact the appropriate state and local agencies if your installation is removing or disposing of asbestos.

The Army's Program

Objectives . . .

- Minimize environmental release and occupational and incidental exposure.
- Exclude asbestos from procurements and uses where asbestos-free substitutes exist.
- Handle, store, transport, and dispose of asbestos in compliance with regulations.
- Develop and maintain an inventory of all asbestos in Army structures and determine the potential for human exposure.
- Implement a program to minimize exposure in areas known to have asbestos until abatement is accomplished.
- Minimize occupational exposure to ensure regulatory compliance.
- Maintain a non-occupational environment safe from exposure.
- Execute an Asbestos Management Plan.
- Train personnel involved with asbestos activities in accordance with federal, state and local laws and regulations.

Commanders Should . . .

- Establish an installation asbestos management team, which prepares and executes the installation's asbestos management plan;
- Confirm that asbestos surveys are performed and updated.
- Notify your MACOM whenever a Notice of Violation (NOV) is received.
- Make sure all NESHAP notification requirements are met before starting any demolition or renovation activities.

References

AR 200-1, "Environmental Protection and Enhancement," February 1997.

AR 385-10, "The Army Safety Program."

AR 405-90, "Disposal of Real Estate," May 1995.

Public Works Technical Bulletin (PWTB) 420-70-8, "Installation Asbestos Program Management," 1997.

Medical Technical Bulletin (TBMED) 513, "Guidelines for the Evaluation and Control of Asbestos Exposure," December 1986.

USAEHA, draft Technical Guide (TG) No. 157, "Installation Asbestos Management Program Guidance."

Federal asbestos regulations are contained in Title 40 CFR Parts 61 and 763. The OSHA standard, which limits occupational exposure to asbestos, is contained in Title 29 CFR Parts 1926 and 1910.

Several guidance documents are available from the EPA to aid individuals responsible for asbestos management or abatement:

EPA 560/5-85-024, "Guidance for Controlling Asbestos-Containing Materials in Buildings," June 1985.

EPA 560/5-85-029A, "Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials," October 1985.

EPA 560/5-85-018, "Asbestos in Buildings Guidance for Service and Maintenance Personnel," July 1985.

EPA 530-SW-007, "Asbestos Waste Management Guidance Generation, Transport and Disposal," May 1985.

Cultural Resources

What Are They?

Many Army installations and facilities are rich in cultural resources such as archeological sites and historic buildings. These non-renewable resources link us to our past and enhance quality of life.

Significant cultural resources must be identified and evaluated, and a process must be developed to manage these resources and maintain our heritage. AR 200-4 states Army policy on cultural resources management and guidance for the treatment of historic properties, including any significant prehistoric or historic district, site, building, structure, or object on Army controlled property.

Current Regulations

Congress passed the **National Historic Preservation Act (NHPA)** in 1966 to encourage federal agencies to administer historic and prehistoric resources in a spirit of stewardship and in harmony with the agencies' missions. The National Register of Historic Places establishes the criteria to evaluate the significance of districts, sites, buildings, structures and objects in American history, architecture, engineering, archeology, and culture. Listed in or eligible for listing in the National Register are "historic properties."

Section 110 of the NHPA requires federal agencies to develop a program to locate, identify, evaluate, and nominate for listing in the National Register historic properties on federal lands. In addition, Section 106 of the NHPA requires that all federal land managers consider the effects of federal undertakings upon historic properties, in consultation with the State Historic Preservation Officer, as set forth by Title 36 CFR (Code of Federal Regulations) Part 800, "Protection of Historic Properties." All undertakings that adversely affect a National Historic Landmark or a historic property must be submitted for comment to the Advisory Council on Historic Preservation (ACHP). Failure to comply with these procedures can result in a finding of foreclosure by the ACHP, or in litigation, potentially forcing the land manager to stop the action or activities.

The **Archeological Resources Protection Act of 1979 (ARPA)** stipulates that anyone investigating archeological resources on federal lands must have a permit or be subject to civil or criminal penalties. ARPA permit requests should be directed to the local U.S. Army Corps of Engineers (USACE) district engineer. Installation law enforcement personnel should be aware of archeological resources that need protection and should monitor these sites regularly.

The **Native American Graves Protection and Repatriation Act of 1990 (NAGPRA)** imposes several requirements on federal agencies. They must summarize and inventory any archeological collections that may contain human remains and cultural items as defined by NAGPRA. This information should be distributed to culturally affiliated, federally recognized Native American tribes, Alaskan Native villages and corporations, and Native Hawaiian organizations. Federal agencies must respond expeditiously to requests for repatriation of NAGPRA materials by such Native American groups.

NAGPRA also requires consultation with tribes prior to excavation of Native American, Alaskan Native, or Native Hawaiian human remains or cultural items. Any inadvertent discovery of human remains or cultural items must be followed with notice to the affiliated tribe and responsible agency manager, and activity in the discovery areas must stop for 30 days.

The **American Indian Religious Freedom Act of 1978 (AIRFA)** protects Native American religious practices and access to sacred sites on federal lands. **Executive Order 13007**, "Indian Sacred Sites," requires installation commanders, to the extent practicable, to accommodate access to sacred sites by Indian groups, and to avoid adversely affecting the physical integrity of such sites.

On April 29, 1994, President Clinton issued a memorandum to the heads of executive departments and agencies, directing them to "operate within a government-to-government relationship with federally recognized tribal governments," and to "consult, to the greatest extent practicable . . . with tribal governments prior to taking actions that affect federally recognized tribal governments." This government-to-government relationship imposes a burden on agencies to respectfully interact with tribal representatives as agents of a sovereign entity, rather than as members of the interested public. Agencies may be required to actively seek out tribal comment on federal agency actions that may affect the tribes, instead of relying on the standard public notice process. This may involve actions such as attending a tribal council meeting to describe the installation's planning process and escorting tribal elders onto the activity site.

The Army's Program

Objectives . . .

- Develop an Integrated Cultural Resources, Management Plan (ICRMP) to locate, inventory, evaluate, and manage cultural resources.
- Complete planning level surveys.
- Follow professional standards for Army cultural resources personnel and projects.
- Enforce the protection of archeological resources under ARPA.
- Implement NAGPRA.
- Establish government-to-government relationships with federally recognized tribes.

Commanders Should . . .

- Provide qualified preservation expertise to develop and implement the ICRMP.
- Be aware of the nature and extent of known cultural resources.
- Coordinate planning processes with interested Native American tribes.
- Verify that the ICRMP is coordinated with master plans and operations.
- Consider the effects of activities on historic and prehistoric resources.
- Plan cultural resources management activities in ways that avoid or minimize effects on operational activities.
- Work with Native Americans to protect access to sacred sites on installation lands (when such access has no significant impact to the mission).

References

AR 200-4, "Cultural Resources Management," 1997.

Executive Order 13007, "Indian Sacred Sites."

Title 36 CFR Part 60, "National Register of Historic Places."

Title 36 CFR Part 800, "Protection of Historic Properties."

The Section 110 Guidelines: Guidelines for Federal Agency Responsibilities under Section 110 of the National Historic Preservation Act (53 FR 4727-4746).

Title 48 CFR Sections 44716-42, "The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation."

National Park Service, "The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings," 1983.

Advisory Council on Historic Preservation, "Identification of Historical Properties: A Decisionmaking Guide for Managers," 1988.

Advisory Council on Historic Preservation, "Public Participation in Section 106 Review: A Guide for Agency Officials, 1989.

Title 43 CFR Part 7 (32 CFR 229), "Protection of Archeological Resources."

Title 36 CFR Part 79, "Curation of Federally Owned and Administered Archeological Collections."

25 USC (United States Code) 3001 et seq., Public Law 101-60, "Native American Grave Protection and Repatriation Act (NAGPRA) of 1990."

Public Law 95-341, 42 USC 1996, as amended by Public Law 103-344, "American Indian Religious Freedom Act."

16 USC 470aa-470ll, "Archeological Resources Protection Act (ARPA) of 1979."

Memorandum, "Government-to-Government Relations with Native American Tribal Governments," 59 Fed. Reg. 22951, May 4, 1994.

16 USC 470-470w-6, Public Law 89-665, "National Historic Preservation Act," as amended by Public Law 96-515, Title XL of 102-575.

Drinking Water

What Is It?

Safe drinking water is a key ingredient to readiness and quality of life. About half of the drinking water in the United States is derived from rivers, streams, and other forms of "surface" water. The other half comes from underground water reserves known as "aquifers."

The quality of underground and surface water is a function of geography as well as the effects of human activity. Natural contaminants include suspended matter, microbiological organisms, sulfates, chlorides, nitrates, fluoride, and radionuclides. Fortunately, modern technology can manage or remove these natural contaminants from drinking water.

Besides natural pollutants, there are more than 60,000 man-made drinking-water contaminants. These are chemicals used by both industry and agriculture and range from solvents to pesticides. When used or discarded improperly, these chemicals can pollute underground and surface water and, in turn, contaminate drinking water. Disinfectants used at water treatment plants to purify drinking water also can create hazardous by-products. For example, chlorine, the standard chemical used in the U.S. to remove bacteria from raw water supplies, can react with natural and man-made chemicals in the water to form undesirable by-products known as trihalomethanes.

Water distribution systems — through which treatment plants pump water to consumers — also pose a threat. Corrosion from rusting pipes and lead from lead-soldered pipes can potentially contaminate water as it moves through the system.

Current Regulations

The **Safe Drinking Water Act (SDWA),** enacted in 1974 and amended in 1986 and 1996, requires the EPA to set primary drinking water regulations for any pollutants that may adversely effect human health. The EPA has set primary drinking water standards — through action levels, treatment techniques, or maximum contaminant levels (MCLs) — for more than 79 pollutants. The SDWA also restricts the use of lead in drinking water distribution systems.

The **Lead Contamination Control Act of 1988** requires states to develop lead monitoring programs for school, day care, hospital and housing drinking water systems. The **Lead and Copper Rule of 1991** established standards for lead and copper content in drinking water and is under revision. The final version of the rule is scheduled to be promulgated in March 1998. The 1996 amendments prohibit use of lead plumbing, including fixtures. Installations must now use lead-free plumbing when replacing plumbing components.

The EPA has developed secondary MCLs to control 15 contaminants in drinking water that primarily affect the aesthetic qualities related to public acceptance of water. These contaminants include chloride, iron, and pH. The secondary regulations are not federally enforceable, but serve as guidelines for state regulatory agencies. However, some states consider the secondary MCLs as enforceable requirements in the same way as primary MCLs. Therefore, installation environmental staffs should determine if their state enforces secondary MCLs.

Water supply system managers are required to regularly analyze treated water to verify that MCLs are met. Water suppliers must also notify their customers whenever water quality does not meet the recommended limits.

The 1996 amendments require water systems to notify users, the state, and the EPA within 24 hours of violations if short-term exposure could cause serious adverse health effects. Installations will have less time to notify users of violations with potentially serious adverse effects. The amendments also require that water systems provide customers with annual "Consumer Confidence Reports," which list levels of regulated contaminants along with maximum contaminant levels and maximum contaminant level goals. The reports must also include a statement of the health concerns for any contaminants for which there has been a violation, describe the sources of drinking water and provide data on unregulated contaminants for which monitoring is required.

The EPA published guidance for state source water assessment programs in August 1997, a result of the 1996 amendments that delineate protection areas and assess contamination risks. The guidance requires states to carry out and complete source water assessment programs within two years. The EPA is also required to promulgate rules that will further control disinfectant and disinfection by-product levels, as well as cryptosporidium (a disease-causing microorganism) in drinking water. The first stage of these rules is scheduled to be published by November 1998.

As far as the Army is concerned, the most important aspect of the 1996 amendments is the expansion of the waiver of sovereign immunity. This waiver allows the EPA to impose civil penalties (punitive and coercive) against the Army. Fines may be up to $25,000 per day per violation. Federal employees also are subject to criminal sanctions (including fines and imprisonment) but not to civil penalties. Citizens are allowed to file suit to force the collection of administrative penalties assessed by the EPA against a federal agency after 18 months if the penalty has not been paid.

The Army's Program

Objectives . . .

- Conserve all water resources through implementation of water conservation plans.
- Provide drinking water that meets all regulatory standards.

Commanders Should . . .

- Provide adequate supplies of drinking water meeting all applicable standards.
- Develop and maintain sampling and analysis programs that comply with regulations.
- Provide copies of regulatory required chemical analyses data to USACHPPM.
- Maintain an active cross-connection control program as required by your state.
- Develop an appropriate wellhead protection or source water protection program that protects source water areas.
- Ensure treatment facility operators obtain required certifications.
- Obtain permits for new or modified drinking water facilities.
- Notify their MACOM when new permits are received and new regulations are proposed or issued that will require modification of existing treatment facilities.
- Notify customers, the state, and the EPA within 24 hours of violations in which short-term exposure could cause serious adverse health effects.
- Submit copies of Notices of Violation (NOVs) to the MACOM.
- When required, produce and distribute annual "Consumer Confidence Reports" to customers.

References

AR 200-1, "Environmental Protection and Enhancement," February 1997.

AR 420-49, "Facilities Engineering Utilities Services Guide," April 1997.

Medical Technical Bulletin (TBMED) 576, "Sanitary Control and Surveillance of Water Supplies at Fixed Installations," March 1982.

USACHPPM Technical Guide (TG) No. 179, "Drinking Water Regulations Under the Safe Drinking Water Act," November 1995.

The national primary and secondary drinking water regulations are contained in Title 40 CFR Parts 141 and 143. Regulations and public documents for the water program are included in Title 40 CFR Parts 104 through 149.

Energy Policy Act of 1992 (Public Law 102-486), which requires federal facilities to install water conservation measures with a payback period of less that 10 years, to the maximum extent practicable.

EPA Pamphlet, "You and Your Drinking Water," December 1986 (available from your Federal Facility Coordinator).

TM 5-660, "Maintenance and Operation of Water Supply, Treatment, and Distribution Systems."

USAEC Report, "Wellhead Protection Requirements and the Status of Army Facilities," prepared by Horne Engineering Services, April 1995.

USAEC and the U.S. Army Center for Public Works, " Wellhead Protection Program and Plan Development Updated Compliance Matrix Supplement," April 1997.

USACHPPM TG No. 216, "Meeting the Requirements of the Wellhead Protection Program," February 1996.

Emergency Planning and Community Right-to-Know

What Is It?

Emergency Planning and Community Right-to-Know is a process for informing potentially-affected populations about the types and quantities of hazardous materials present in living and work places. It allows individuals to judge for themselves the potential personal risks from living or working in a specific area. It also allows for effective emergency procedures in the event of a spill, or other uncontrolled release, of hazardous materials.

Current Regulations

In November 1986, Congress passed the **Emergency Planning and Community Right-to-Know Act (EPCRA),** also known as **SARA Title III. Executive Order 12856,** "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements," dated August 3, 1993, extends EPCRA to federal facilities. EPCRA mainly encourages and supports emergency planning for response to chemical accidents, and provides local governments and the public with information about possible chemical hazards in their communities.

Local communities and states have the responsibility for understanding, managing, and reducing risks posed by chemicals, and for dealing with emergencies within their communities. Public and private facilities are responsible for gathering information on the chemicals they use, store and release into the environment. They also must provide this information to government agencies and local communities and help set up procedures to handle chemical emergencies.

At the federal level, the Environmental Protection Agency (EPA) is responsible for ensuring that industry complies with the law, that the public has access to information on annual toxic chemical releases, and that the information is used to protect the nation's air, water and soil.

According to EPCRA

States must . . .

- Establish a State Emergency Response Commission (SERC) to supervise and coordinate emergency planning within the state.
- Designate Local Emergency Planning Committees (LEPCs) to facilitate preparation and implementation of emergency plans.

INDIVIDUALS, FIRMS, MUNICIPALITIES AND STATES (WITH DESIGNATED HAZARDOUS SUBSTANCES AT THEIR FACILITIES IN AMOUNTS GREATER THAN ESTABLISHED LIMITS) MUST . . .

- Notify the SERC, LEPC, EPA and local fire department of the presence of certain hazardous substances in quantities above specified levels.
- Immediately notify the LEPC and SERC when any hazardous substance is released (in quantities greater than established levels) into the environment beyond the facility boundary.
- Prepare an annual report detailing the amounts of all hazardous materials released and amounts transported as waste to another location.

THE ARMY'S PROGRAM

OBJECTIVES . . .

- Comply with EPCRA and Executive Order 12856.
- Maintain an emergency notification plan for the release of regulated substances.

COMMANDERS SHOULD . . .

- Account for the types and quantities of hazardous substances used and stored on the installation, including those required to operate and maintain weapon systems whether or not these are subject to EPCRA.
- Notify the National Response Center immediately if a hazardous substance is released in excess of or equal to a reportable quantity. Also notify the MACOM, LEPC and SERC.
- Submit Material Safety Data Sheets (MSDS) to the LEPC and the fire department for hazardous chemicals handled in amounts above designated threshold planning quantities.
- Designate an Army employee to represent them on the LEPC.
- Provide the LEPC, SERC and local fire departments with the identities and amounts of chemicals on-site and information on their storage conditions, locations and hazards.
- Provide the designated state official and EPA headquarters with data on toxic chemical releases and transfers for the nationwide Toxics Release Inventory report.
- Make sure contractors comply with all requirements that apply to their operations on or for the installation.
- Respond to requests by the LEPC for information concerning hazardous substances on the installation.

REFERENCES

AR 200-1, "Environmental Protection and Enhancement," February 1997.

Title 40 CFR (Code of Federal Regulations) Parts 300, 350, 355, 370 and 372.

Environmental Noise

What Is It?

Noise is the phenomenon of sound waves moving through air. Army generated noise may affect the health and readiness of Army personnel. Off-post civilians also may be affected in their homes and places of work.

Intensity of sound is commonly thought of as loudness and is measured in units called decibels (Db). A zero on the decibel scale represents the lowest limit of human audible perception; the level of normal conversation is about 60 Db. The Db scale is logarithmic, which implies that as the Db level of sound increases by 10 units, the intensity or energy of the sound increases by a factor of 10. For instance, a Db value of 70 represents 10 times the energy of 60 Db.

Current Regulations

In 1970, Congress passed the **Noise Pollution and Abatement Act,** which was chiefly responsible for investigating the effects of environmental noise on public health.

The **Noise Control Act of 1972** set the goal of protecting all Americans from noise that jeopardizes their health and welfare. This legislation enables the Environmental Protection Agency (EPA) to establish noise standards, and to regulate noise emissions from commercial products such as transportation and construction equipment. Individual states developed their own noise regulations under this 1972 act.

The **Quiet Communities Act of 1978**, popularly known as the "Boom-Box Law," amended the Noise Control Act by providing state and local governments with funds to promote the development of noise control programs on a local level as long as the programs are consistent with federal regulations. Many state and local governments have developed environmental noise regulations under this act.

These noise regulations and standards came about for quality-of-life reasons, rather than direct threats to human health or hearing loss that the Occupational Safety and Health Administration (OSHA) covers for the workplace. The Surgeon General of the Army has set a noise standard for occupational exposure of 85 Db (A scale) for 8 hours (time weighted average).

The Army's Program

Because the Noise Control Act of 1972 exempts noises from military weapons or equipment designated for combat use, DoD established the Installation Noise Management Program (INMP) to work with local communities on controlling land uses around military installations.

Objectives . . .

- Assess the environmental impact of noise to be produced by proposed actions.
- Comply with federal environmental noise regulations.
- Keep the installation mission compatible with local land uses through an effective INMP.
- Assess the effects of both on-post and off-post noise sources.
- Minimize environmental noise impacts through engineering, operational controls, siting, and procurement.
- Reduce interior noise levels through architectural and engineering controls.

Commanders Should . . .

- Develop noise zone maps for the installation's current and future peacetime activities.
- Conduct initial and follow-up INMP studies when necessary.
- Support local and state agencies in developing land-use plans.
- Identify sources of noise and budget resources to lessen their impact.
- Maintain efficient, community friendly noise complaint procedures.
- Activate an INMP committee.

References

AR 200-1, "Environmental Protection and Enhancement," February 1997.

Technical Manual (TM) 5-803-2, "Environmental Protection: Planning in the Noise Environment."

Regulations concerning noise abatement programs are contained in Title 40 CFR (Code of Federal Regulations) Parts 200 through 211.

For general information about noise pollution:

U.S. Army Logistics Management College (ALMC), "Workbook for Managers' Environmental Course."

EPA Brochure, "Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety," March 1974.

Federal Interagency Committee on Urban Noise, "Guidelines for Considering Noise in Land Use Planning and Control," June 1980.

Planning and Management Consultants, Ltd., "Examination of Noise Management Approaches in the United States," 1988.

U.S. Army Corps of Engineers, Institute for Water Resources, Report No. IWR-88-R-8.

Fish and Wildlife Management

What Is It?

The Army's Fish and Wildlife Program includes:

- Fisheries management.
- Management of game and non-game species.
- Urban wildlife management.
- Fish and game law enforcement.
- Control of problem animals.

The program applies to all Army commands and personnel, and applies to Army installations on United States soil that contain areas suitable for conservation and management of fish and wildlife resources. The suitability of a military installation for fish and wildlife management is determined after consultation with the U.S. Fish and Wildlife Service (FWS) and the state. Program emphasis is placed on the maintenance and restoration of habitat favorable to indigenous species.

Current Regulations

The **Sikes Act** requires the Secretary of Defense to carry out a program for planning, managing, maintaining and coordinating fish and wildlife (including game) resources, and the conservation and rehabilitation of such resources. Each installation commander with fish and wildlife resources is required to develop – through coordination and concurrence of the Department of Interior (DOI) and the applicable state fish and game agency – and implement an Integrated Natural Resources Management Plan. The Sikes Act authorizes the installation commander to sell hunting and fishing permits, and the funds shall be used for conservation purposes on the installation on which they are collected. The installation commander shall manage fish and game resources to provide sustained multipurpose uses to an extent consistent with the military mission.

The **Migratory Bird Treaty Act (MBTA)** is the federal law enforcing international conventions for the protection of migratory birds. It provides protection for essentially all species of birds except for the rock dove (pigeon), house sparrow and European starling.

The Army's Program

Objectives . . .

- Maintain and enhance fish and wildlife resources in a manner consistent with both accepted scientific practices and military mission requirements.
- Improve natural surroundings for personnel living and working on the installation.
- Enhance public relations and recreational opportunities and stimulate community support for the military presence.
- Comply with all state and federal laws that pertain to the management of fish and wildlife resources.

Commanders Should . . .

- Prepare, implement and update (no less than every five years) an Integrated Natural Resources Management Plan (INRMP), in coordination with the appropriate state and federal fish and wildlife conservation agencies.
- Program funds to effectively develop and implement the INRMP.
- Require the optimum use and staffing of professionally trained personnel (such as a wildlife manager).
- Coordinate with the U.S. Fish and Wildlife Service before the intentional taking of migratory birds.
- Establish a program to enforce fish and wildlife laws, and make sure all hunting, fishing and trapping regulations are followed.

References

AR 200-3, "Natural Resources — Land, Forest and Wildlife Management," February 1995.

DoD Instruction 4715.3, "Natural Resources Management Programs," May 1996.

Title 16 USC (United States Code) Section 670, "Conservation on Military Installations (Sikes Act)," as amended.

Title 16 USC Section 1531, "Endangered Species Act of 1973," as amended, October 1988.

Forest Management

What Is It?

The Army manages its land and vegetation, including forests, to train soldiers, support the military mission, and fulfill its role as a responsible steward of public land. Benefits of an ecologically sound forest management program include maintenance of forest health, biodiversity, natural beauty, recreation, improved wildlife habitat, and protection of watersheds, cultural resources and endangered species.

Current Regulations

As part of the **Defense Appropriations Act of 1961**, Congress provided authority for the military departments to retain receipts from sales of forest products that otherwise would be deposited in the miscellaneous receipts of the U.S. Treasury. The Army's timber-sale receipts from the general forest products account may be used only to support forest management. This provision was codified in Title 10 USC (United States Code) by the **Military Construction Authorization Act of 1978**. Title 10 USC Section 2665(e) was amended in 1982 to return 25 percent of net proceeds from installation timber sales to the states in which the installations are located. This amendment provided that states use these entitlements to benefit public schools and roads. Congress again amended Title 10 USC Section 2665 in 1984 to increase entitlement to states to 40 percent. This amendment, Public Law 99-561 **(Sikes Act)**, provides for surplus forest product sale receipts to be placed in a DoD reserve account that can be used to support installation forestry and other natural resources projects.

The Army's Program

Objectives . . .

- Maintain an integrated and ecologically sound forest management program tailored to mission needs.
- Maintain forest health, biodiversity and sustainability.
- Make forest management activities compatible with plans to manage land, outdoor recreation areas and wildlife.
- Practice professional standards of silviculture based on scientifically proven methods for timber species managed.
- Incorporate ecosystem management practices into forest management activities.

Commanders Should . . .

- Establish optimum staffing with the appropriately trained personnel.
- Support mission operations and stewardship requirements.

References

AR 200-3, "Natural Resources — Land, Forest and Wildlife Management," February 1995.

Title 10 USC Section 2665, "The Military Construction Act of 1978."

DoD Instruction 4715.3, "Natural Resources Management Program," January 1989.

Hazardous Waste and Materials

What Are They?

The Army uses many hazardous materials (HM) and can generate large volumes of hazardous waste (HW). Hazardous materials are used in nearly every part of the Army mission and include paints, solvents, batteries, gas mask cartridges and weapon cleaning patches. Generally, the directorates of Logistics and Public Works, as well as the Defense Reutilization and Marketing Office (DRMO), are responsible for purchasing hazardous materials and disposing of waste on an installation. The pervasive nature of HM/HW forces Army units throughout the installation to know how to manage their hazardous materials.

Two important tools are available to Army commanders for controlling the cost of hazardous materials purchase and hazardous waste disposal: the Hazardous Material Control Center (HMCC) and the Hazardous Substance Management System (HSMS). HMCC allows the installation to control the issue of hazardous materials, helping it to reduce the amount of hazardous wastes generated. This saves both purchase and disposal costs, and reduces the regulatory compliance burden. HSMS helps installations track HM/HW, maintain HM/HW inventories and meet HW reporting and other compliance requirements.

Current Regulations

Hazardous Materials

U.S. Department of Transportation (DOT) regulations define hazardous chemicals as those determined by the Secretary of Transportation to present risks to safety, health and property during transportation. These include hazard classes such as flammables, explosives and poisons. The DOT regulations require worker training, shipping papers (manifests), package marking, labeling and vehicle placarding. Occupational Safety and Health Administration (OSHA) regulations for hazard communication play an important role in complying with these regulations, especially requirements for Material Safety Data Sheets, which ensure that workers know the hazards of the materials they use. State regulators, the Transportation Department or the EPA may enforce these regulations.

Hazardous Waste

There are two protocols for regulating hazardous waste. One is the cleanup of hazardous waste from past activities, which is principally regulated by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLA is discussed in the "Installation Restoration Program" section. The other regulation of

ongoing hazardous waste activities comes under the **Resource Conservation and Recovery Act (RCRA)**. RCRA's complex regulations and rigorous standards have long been the Army's largest cause of environmental enforcement actions. States generally have primacy for RCRA enforcement but the EPA can join state regulators in inspections. Since the **Federal Facility Compliance Act (FFCA)** waived sovereign immunity in 1992, Army installations have paid substantial RCRA fines.

The cornerstone of RCRA is its definition of solid and hazardous waste. The most fundamental task for an installation is to determine which of its waste streams contain hazardous waste. RCRA details exact requirements for generators and transporters of hazardous waste and for HW treatment storage and disposal facilities. Failure to meet these exacting requirements is the cause of most the Army's RCRA compliance problems. Common RCRA deficiencies include:

- Improper labeling of a HW drum.
- Storing HW longer than the authorized time period.
- Improper training records or training (all personnel involved in hazardous waste activities must receive annual training on safety and operational requirements).
- Manifest deficiencies.

RCRA requires permits for most treatment, storage, or disposal facilities. Most major Army installations seek or have obtained such permits. Due to the high cost of permitting, installations pursue RCRA permits only when no cost-effective alternative to owning the permit exists. Army facilities that require RCRA permits include sites that store materials for longer than 90 days; open burning/open detonation sites; and deactivation furnaces. Seeking and maintaining these permits have proven to be very costly. Therefore, AR 200-1 requires installations to obtain MACOM and Department of the Army approval for all new permit applications and renewals. Requests for such approvals must be supported by a needs analysis and NEPA documentation.

Spills of Hazardous Substances

Proper management of HM and HW includes adequate spill prevention measures. Each installation with the capability to release a reportable quantity of oil or a hazardous substance must prepare and implement a Spill Prevention, Control, and Countermeasure Plan (SPCCP) and an Installation Spill Contingency Plan (ISCP). RCRA has spill control requirements for RCRA hazardous waste facilities but other regulations, such as CERCLA and the **Clean Water Act (CWA)**, are much broader and cover all hazardous substances.

"Hazardous substance" is a legal term that generally equates to the DOT hazardous materials list plus the RCRA hazardous waste list. These hazardous substances are regulated if spilled or otherwise released to the environment. If more than the EPA designated "reportable quantity" of a

hazardous substance is released to the environment, the release must be reported to the appropriate regulatory agency. When spills of oil and other petroleum products could enter waterways, they are regulated under the CWA.

Other Hazardous Materials and Wastes

Polychlorinated Biphenyls (PCBs) are a special group of hazardous materials regulated by the **Toxic Substances Control Act (TSCA)**. These are commonly found at Army installations, especially in older electrical transformers, and require special attention from the Public Works directorate. The TSCA banned the manufacture of PCBs in 1977 and closely regulates the use, storage and disposal of those still in use. It is Army policy to manage these PCBs in accordance with TSCA and leave them in place until operational, economic, or environmental considerations justify their removal.

Medical Waste. Army organizations, and most states, apply the term Regulated Medical Waste (RMW) to what is sometimes known as infectious waste. RMW is not regulated by the EPA, but states often regulate RMW management.

The Army Medical Department (AMEDD) has responsibility for properly managing and disposing of RMW. Health care facilities generally have their own regulations, which reflect state and local requirements. These regulations are reviewed and the actions described are monitored by various AMEDD inspections. Commanders can receive specific information from the local AMEDD commander.

Tracking Costs

Visible data on projected environmental costs can impact command decisions, particularly early in the design, development or modification of Army systems.

Installation commanders should track and report information on the root causes and costs of waste streams. This not only aids in planning, programming and budgeting, it also helps materiel developers and others to better estimate environmental impacts and life cycle costs.

The Army's Program

A Hazardous Material Control Center (HMCC) centrally manages hazardous materials through strict inventory control, in order to reduce the use and waste of these materials. Large amounts of HM stored on an Army installation may become hazardous waste if its shelf life expires or it is stored improperly. Establishment of an HMCC can significantly improve the tracking and inventory control of HM, resulting in significant decreases in waste and the amount of materials purchased.

Hazardous Substance Management System (HSMS), from Defense Environmental Security Corporate Information Management (DESCIM), is the Defense Department's standardized automated system for tracking hazardous substances. The Army plans to transition all existing tracking systems for hazardous substances to HSMS. Installations must implement HSMS if they are not currently operating an automated hazardous substance tracking system and wish to do so.

OBJECTIVES . . .

For Hazardous Materials:

- Ensure best management practices for all hazardous materials.
- Comply with DOT regulations for transportation and OSHA hazard communication standards.
- Comply with applicable federal, state and local regulations.
- Use nonhazardous substitutes to the maximum extent practicable.
- Conserve resources through recovery, recycling and reuse.
- Implement the Hazardous Material Control Center concept, using HSMS as the automated tracking tool.
- Properly train all personnel who work with hazardous materials (and document the training).

For Hazardous Waste:

- Comply with all pertinent, federal, state and local regulations.
- Correct regulatory violations in a timely manner.
- Systematically evaluate waste streams and ensure they are properly managed.
- Properly train all personnel who work with hazardous waste materials (and document the training).
- Implement and communicate HW management procedures wherever hazardous waste is generated or otherwise managed.
- Submit justification with needs analysis for any new permit requests or permit renewal through MACOM's to HQDA.
- Use the Defense Reutilization and Marketing Office (DRMO) for routine HW disposal needs, unless an exemption is approved by HQDA.

For the Hazardous Material Control Center (HMCC):

- Centralize hazmat requisition, issue, storage and disposal.
- Distribute to authorized users in quantities limited to immediate needs.
- Track HM throughout its life cycle at a facility.
- Collect or reissue unused serviceable HM on a free-issue basis.
- Cut costs by reducing the HM inventory on an installation.
- Reduce amounts of waste disposed and materials purchased.

For the Hazardous Substance Management System (HSMS):

- Track HM requisitioned, received, stored, issued, used and recycled, and hazardous waste disposed, from "cradle to grave."
- Maintain information on all processes that use HM or generate hazardous waste.
- Calculate chemical release information.
- Generate all required federal environmental reports.

For Spills of Hazardous Substances:

- Comply with all applicable regulations.
- Manage and dispose of oil and hazardous substances in a safe and environmentally sound manner.
- Provide for prompt, coordinated response to contain and clean up spills.
- Cooperate with non-Army agencies to prevent spills.
- Assist, in accordance with the National Contingency Plan (NCP), with cleanup of spills not caused by Army activities (consistent with operational commitments).

COMMANDERS SHOULD . . .

For Hazardous Materials:

- Establish procedures to identify and correct management deficiencies.
- Establish a training program and make sure all involved personnel are properly trained.

For Hazardous Waste:

- Establish a Hazardous Waste Training Program to make sure all involved personnel are properly trained.
- Work with DRMO to determine markets for materials and wastes.
- Maintain responsibility for hazardous waste management for all installation activities, including tenants and sub-installations.
- Use the installation Environmental Quality Control Committee (EQCC) to promote progress in meeting HW reduction and supporting pollution prevention goals.
- Support the efforts of the environmental coordinator.
- Set up or maintain a payment system for HW disposal costs.
- Conduct routine courtesy inspections of HW activities on post as needed.
- Consider alternatives to owning RCRA permitted facilities before seeking to renew or obtain a RCRA permit.
- Notify the MACOM immediately of any Notices of Violation (NOVs).

For Spills of Hazardous Substances:

- Develop and implement SPCCPs and ISCPs.
- Update the SPCCP every two years.
- Perform inspections to verify compliance and test ISCPs.
- Comply with OSHA regulations for operations, medical surveillance and training of installation spill teams.
- Ensure proper materials management.
- Consult with the installation public affairs officer concerning reaction to spills.
- Budget for resources needed for emergency response.
- Determine if the facility can respond appropriately to off-post spills.
- Make sure reportable releases are reported to appropriate authorities.
- Appoint an Installation On-Scene Coordinator (IOSC) and an Installation Response Team (IRT).
- Notify the MACOM immediately if a spill occurs.

REFERENCES

AR 200-1, "Environmental Protection and Enhancement," February 1997.

RCRA hazardous waste regulations are contained in Title 40 CFR Parts 260 through 270.

DOT hazardous materials regulations are contained in Title 49 CFR Parts 106 through 178.

Hazardous communication regulations are contained in Title 29 CFR.

TSCA regulations are contained in Title 40 CFR Part 760. Rules for oil spills, extremely hazardous substances, and PCB regulations under TSCA are detailed in Title 40 CFR Part 761.

CERCLA hazardous substance regulations are contained in Title 40 CFR Parts 300 through 302.

OSHA training requirements are outlined in Title 29 CFR Part 1910.

TM 38-410, "Storage and Handling of Hazardous Material," May 1992.

Military Munitions Rule and the Range Rule

The Department of Defense and the services have safely transported and stored military munitions for many years. But in 1992, the Federal Facility Compliance Act required DoD to work with the U.S. Environmental Protection Agency to develop regulations for determining when military munitions become hazardous waste, and providing for safe storage and transportation of such wastes before disposal. On February 12, 1997, EPA's Military Munitions Rule (MR) was published in the Federal Register with an effective date of August 12, 1997. It addresses the safe handling of out-of-service conventional and chemical munitions.

DoD's proposed Range Rule is a five-phase process to address closed, transferred and transferring military munitions ranges. It addresses munitions not covered by the MR.

A **closed range** is taken out of service as a range by the military at an active installation and given a use incompatible with range activities. A **transferred range** has been released from military control. A **transferring range** is either under consideration for or in the process of being removed from military control.

Current Regulation

The MR is an EPA regulation, but its implementation may vary by installation. MR implementation covers eight major issues.

The MR Does . . .

- Establish definitive guidance for when munitions become waste, under the categories "unused," "used," and "fired."
- Provide a conditional exemption from Resource Conservation and Recovery Act (RCRA) storage and transportation requirements for certain waste military munitions. Conditionally exempted waste munitions are managed according to DoD Explosives Safety Board (DDESB) standards as described in DoD 6055.9-STD and further reporting and notification requirements described in the MR.
- Provide a manifesting exemption that allows transit from one area to another on the same installation along a publicly accessible road.
- Consolidate all requirements solely applicable to military munitions in 40 CFR Part 266, Subpart M. Other applicable requirements not unique to munitions are retained elsewhere in 40 CFR and referenced.

The MR Does NOT...

- Dictate a national standard for management of waste military munitions. RCRA allows states to adopt more stringent regulations, although DoD has developed a process to promote consistent state implementation.
- Allow for acceptance of waste from off-site sources unless explicitly allowed by the installation's RCRA permit. [However, the MR provides for interim acceptance of wastes from off-site sources (pending formal permit modification).]
- Exempt emergency response personnel from seeking an emergency permit when immediate response is not necessary and may be deferred. [However, the MR exempts emergency personnel from compliance with generator, transporter, and permitting requirements when immediate emergency response is required.]
- Regulate corrective actions for military munitions on closed, transferred or transferring ranges.

The Range Rule Process

The process to manage potential environmental and health risks associated with military ranges focuses on five phases:

1. Identifying the range as closed, transferred or transferring.
2. Assessing potential safety and environmental risks on the range and addressing imminent risks through "accelerated response" actions.
3. Providing a range evaluation and site-specific response, which takes into consideration the characteristics of munitions used on the range and the environmental setting. This also includes examining alternatives for addressing risks not reduced or eliminated by earlier responses.
4. Conducting recurring reviews to ensure that range response actions promote explosives safety and protect human health and the environment.
5. Ending the response after completing the review to ensure that the range is unlikely to pose further risk.

For More Information:

Contact the Department of Defense Range Rule Information Center.

Mailing address:

Department of Defense Range Rule
PO Box 3430
Gaithersburg, MD 20885-3430

Phone: (888) 541-1081
(800) 870-6557 *(for the hearing impaired)*

Fax: (800) 870-6547

E-mail: fbarrule@b-r.com

You also can download a copy of the proposed Range Rule from the Department of Defense Environmental Security World Wide.

Web site:

http://www.acq.osd.mil/ens/

Installation Restoration Program

What Is It?

The Army's Installation Restoration Program (IRP) was established in 1975 to identify, investigate, and clean up contamination on Army properties. The program is conducted under the auspices of the Defense Environmental Restoration Program (DERP) as established by the **Superfund Amendments and Reauthorization Act (SARA)** in 1986. The IRP process consists of the following steps:

Preliminary Assessment/Site Inspection (PA/SI)

The PA/SI identifies sites with potential hazardous waste contamination. The PA consists of a review of available historical information (also known as a records search) concerning installation activities and land use; the SI is an on-site visit to verify the findings of the PA. The SI frequently encompasses the collection of samples to facilitate an initial screening of potential problem areas.

Remedial Investigation/Feasibility Study (RI/FS) and Record of Decision (ROD)

The RI is a detailed study that includes soil and water sampling to determine the nature and extent of contamination at a site. The RI also includes a health assessment, which estimates risks to human health and the environment as a result of the contamination. The FS identifies alternatives for remediation (or cleanup) of the site and recommends the preferred cleanup strategy, which is presented to regulators and the public in the proposed plan. Following approval of the proposed plan, a ROD is prepared describing the remedy.

Interim Response Action (IRA) and Remedial Action (RA)

RAs can include removing wastes from the site for off-post treatment or disposal, or containing or treating the waste on-site. IRAs, short-term activities undertaken to address environmental contamination, may be conducted at any time during the IRP process. IRAs are consistent with the final remedy selected in the ROD.

Current Regulations

The IRP is the Army equivalent to the EPA's "Superfund" program, which resulted from the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)** in 1980. SARA of 1986 formally requires that all IRP investigation and cleanup activities at Army hazardous waste sites comply with the procedural and substantive requirements of CERCLA. Funding for IRP activities is provided by an Army transfer account known as

Environmental Restoration, Army. Under CERCLA and SARA, both private and federal hazardous waste sites are ranked and prioritized for cleanup actions on the EPA's National Priorities List (NPL). Under SARA, Congress established the Federal Agency Hazardous Waste Compliance Docket, also known as the Federal Facility Docket. The aims of the Docket are to identify federal facilities that must be evaluated for inclusion on the NPL, and to compile and maintain information on the cleanup status of these sites.

The National Priorities List

The National Priorities List (NPL) includes private and federal hazardous waste sites that, based on release or potential for release of contaminants, have been designated "high priority" for action by the EPA.

Once an installation is placed on the NPL, it may enter into a Federal Facilities Agreement (FFA), a formal agreement between the EPA, the state, and the Army that establishes objectives, responsibilities, procedures, and schedules for remediation at each installation. DoD policy calls for FFAs to be negotiated as early as possible in the RI/FS process for NPL and proposed NPL sites.

Actions Required for NPL Sites:

- Listing on the NPL.
- Begin RI/FS within six months of placement on NPL, in consultation with the EPA and state.
- Establish an Interagency Agreement (IAG) with the EPA and the state for completion of RA within 180 days of ROD.
- The EPA reviews the RI/FS.
- Send public notice and conduct public meetings on proposed RA plan.
- Issue the ROD.
- Issue public notice of final RA plan selected.
- Begin "substantial continuous physical on-site RA" no later than 15 months after completion of the RI/FS.
- Operations and maintenance on the site.
- Post closure monitoring of site.

Note: *Installations not listed on the NPL undergo the same process for investigation and cleanup but may be under state control.*

WHO'S INVOLVED?

Installations work with several Army agencies during implementation of the IRP:

The U.S. Army Environmental Center (USAEC) manages the IRP for the Army. The Center also provides technical oversight of environmental cleanup actions at all installations.

Before required approval by the Army Surgeon General, the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) reviews the health risk assessments performed during the RI.

The U.S. Army Corps of Engineers (USACE) conducts the investigation and cleanup phases of the IRP at an installation, according to the commander's directions. The design and construction associated with cleanup of the Army's hazardous waste sites are the responsibility of the USACE as directed by the installation commander. Selected districts within each Corps division have been designated for remedial design activities. Remedial action construction, in turn, is carried out by Corps of Engineers districts in which the sites are located.

THE ARMY'S PROGRAM

OBJECTIVES...

- Identify, investigate and clean up contamination from hazardous substances, pollutants and contaminants.
- Give first priority to identifying and cleaning up the sites that present the highest risk to public health and the environment.
- Research and develop cost-effective cleanup and study methods.

COMMANDERS SHOULD...

- Verify that IRP activities comply with regulations.
- Report major IRP developments and incidents to the MACOM.
- Report discovered releases first to the MACOM, then to appropriate regulatory agencies.
- Identify resources needed for restoration.
- Serve as the lead and assign a remedial project manager.
- Review plans and recommendations for IRP actions in coordination with USAEC and the MACOM.
- Establish a Technical Review Committee or Restoration Advisory Board, as appropriate.
- Develop and maintain a community relations program.
- Report proposals for real property transactions through command channels to the Office of the Director of Environmental Programs.

References

AR 200-1, "Environmental Protection and Enhancement," February 1997.

USAEC, "U.S. Army Installation Restoration Program Guidance Manual," December 1993.

USAEHA Technical Guide No. 180, "Health Risk Assessment Guide for the Installation Restoration Program and Formerly Used Defense Sites," June 1990.

Title 40 CFR Parts 300-355, 370 and 372 (CERCLA and SARA regulations).

USAEC, "Installation Restoration Program Management Plan," December 1996.

USAEC, "Army Guidance Concerning Restoration Advisory Boards," October 1996.

USAEC, "Installation Restoration Program Action Plan Guidance," January 1997.

Land Management: Integrated Training Area Management

What Is It?

Lands that support military missions are valuable Army assets. The Army recognizes that in training to doctrinal standards it will impact the environment. The primary goal of land management is to ensure the long-term availability of land and natural resources for mission activities. This goal is compatible with and depends on sound stewardship and conservation practices.

Natural ecosystems play a vital role in a healthy environment, and installations can best maintain ecosystems by giving special consideration to soil and vegetation characteristics, surface and subsurface water, wetlands, archeological and geological sites, flood plains, and wildlife resources in their operations, development, design, construction and maintenance activities.

The Army incorporates ecosystem management principles into the Integrated Training Area Management (ITAM) program, the comprehensive approach to land management on Army installations. ITAM establishes a systematic framework for making decisions on the use of Army training lands, by integrating elements of operational, environmental, master planning and other programs to identify and assess land use alternatives. The Office of the Deputy Chief of Staff for Operations and Plans (DCSOPS) is the proponent and has responsibility for the ITAM program.

ITAM includes four components:

Land Condition Trend Analysis (LCTA), a management procedure that provides for collecting, inventorying, monitoring, managing, and analyzing tabular and spatial data concerning land conditions on an installation.

Training Requirements Integration (TRI), a decision support procedure that integrates training requirements with processes to manage land, training and natural and cultural resources. TRI also accounts for data derived from LCTA and Army conservation program components.

Land Rehabilitation and Maintenance (LRAM), a preventive and corrective land rehabilitation and maintenance procedure that reduces the long-term impacts of training and testing on installation lands.

Environmental Awareness (EA), a means to develop and distribute educational materials to land users. Materials relate procedures for sound environmental stewardship of natural and cultural resources and reduce the potential for inflicting avoidable impacts.

An effective installation ITAM program increases training realism, promotes effective land rehabilitation, abates environmental damage, reduces costs for land management and environmental compliance, and enhances the Army's public image as a conscientious land steward.

Current Regulations

Some major areas that must be addressed to accomplish the Army mission while complying with environmental requirements include:

- Soil conservation and maintenance of ground cover to stabilize soil and reduce erosion (as directed by **Public Law 74-46, "Soil Conservation"**).
- Provision of sediment control structures to ensure sediments do not enter streams or other water bodies, maintain training grounds, and comply with the **Clean Water Act (CWA)** and nonpoint source pollution requirements.
- Protection of wetlands and other sensitive areas to ensure no net loss or alterations (as directed by the CWA).
- Planning level surveys of threatened and endangered species, vegetation, topography, soils, wetlands, surface waters, flora, and fauna – so that use and management activities may be planned and implemented to ensure the sustainment and best use of natural resources.

AR 350-XX, "Integrated Training Area Management (ITAM)," sets forth the objectives, responsibilities, and policies for the ITAM Program.

Generally, carrying out national land-use and conservation policies is required on all federal lands to the extent practicable and without affecting the assigned mission. These policies are incorporated in AR 200-3, which also contains guidelines for Integrated Natural Resources Management Plans.

Land management uses a significant amount of appropriated funds. Also, revenues from the agricultural and outlease program are available for use in an installation's Natural Resources Management Program under Title 10 USC (United States Code) 2667(d).

The Army's Program

Objectives . . .

- Avoid or minimize adverse mission impacts by integrating mission activities with the capability of the land to support them.
- Cooperate with local, state and federal organizations in carrying out national land-use and conservation policies.
- Develop and implement programs and plans to maintain and improve environmental quality, aesthetic values and ecological relationships.
- No net loss of training lands.

Commanders Should . . .

- Establish optimum staffing of professionally trained personnel.
- Implement and/or sustain an ITAM program.
- Seek supplementary aid from appropriate natural resources agencies (federal, state and local) for technical assistance.
- Verify that planning level surveys are completed and maintained.
- Structure land management programs to support (or have no negative impact on) mission operations.
- Develop cooperative agreements with appropriate natural resources agencies.
- Determine the most environmentally acceptable land use by such factors as soil, water, vegetation, climate and topography.
- Inspect outleased lands periodically to ensure compliance with maintenance and conservation requirements.

References

AR 200-3, "Natural Resources — Land, Forest and Wildlife Management," February 1995.

AR 350-XX, "Integrated Training Area Management (ITAM)." Effective date TBD (Implementing Draft approved 14 December 1997).

AR 405-80, "Granting Use of Real Estate," February 1989.

DoD Instruction 4715.3, "Natural Resources Management Program," May 1996.

ACSIM (DAIM-ED-N) Memorandum, Subject: Army Goals and Implementing Guidance for Natural Resources Planning Level Surveys (PLS) and Integrated Natural Resources Management Plan (INRMP), 21 March 1997.

HQDA, "Integrated Training Area Management (ITAM) Program Strategy," 18 August 1995.

Lead Hazard Management

What Is It?

It is the management of lead-based paint (LBP) and other lead hazards. Lead, the most serious environmental threat to young children today, is of great concern to the Army. Lead paint was first introduced into the United States in the early 1900s and remained widely used on some Army installations until the 1970s.

The most immediate lead hazards are found in structures with peeling lead paint or excessive levels of lead dust from deteriorating paint. Windows are often a hazard because the friction of opening and closing the window generates large amounts of dust. Also, if renovations are not performed correctly, lead dust can spread throughout the structure and surrounding environment.

Current Regulations

The Army's concerns over LBP stem from the proper disposal of waste and debris (such as paint chips and painted building parts) from the demolition of World War II-era structures on Army installations. In 1992, Title IV of the **Toxic Substance Control Act, Lead Exposure Reduction,** (Public Law 102-550) specifically waived sovereign immunity and required federal facilities to comply with state and local regulations on lead-based paint. Under the **Resource Conservation and Recovery Act,** installations are required to characterize their lead-based paint waste and dispose of it by an approved method. Occupational Safety and Health Administration (OSHA) regulations establish standards for protecting workers exposed to lead. Many states have regulations that are more stringent than the federal standards and installations are required to comply with these more restrictive state standards.

The Army's Program

Objectives . . .

- Minimize environmental releases and occupational and incidental exposure.
- Handle and dispose of lead-based paint and other lead hazards in compliance with regulations.
- Perform risk assessments in family housing and child-occupied facilities to identify lead hazards in paint, dust, and soil.
- Train personnel involved with lead activities in accordance with all federal, state and local laws and regulations.
- Implement an interim control program (in-place management and on-going monitoring) to prevent childhood and worker over exposure to lead hazards.
- Disclose to occupants, upon assignment of family housing, the known presence of LBP or other lead-based hazards.

Commanders Should . . .

- Promote working and living environments free from lead hazards.
- Verify that lead-containing debris and waste from demolition and abatement projects are disposed of in an approved method.
- Comply with applicable federal, state, and local laws and regulations concerning characterization, handling, storage, transportation and disposal of lead contaminated waste.
- Establish installation lead hazard management teams to develop and implement lead hazard management plans.

References

Public Law 102-550, Housing and Community Development Act of 1992, October 1992; Title X, Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title 42 USC 4851).

Title 29 CFR (Code of Federal Regulations) Part 35, Subtitle A (April 1, 1992), Subpart E, "Elimination of Lead Based Paint Hazards in Federally Owned Properties Prior to Sale for Residential Habitation."

Title 29 CFR 1910 Part 1025, Lead.

Title 29 CFR Part 1926.62, "Lead Exposure in Construction; Interim Final Rule," May 4, 1993.

Title 40 CFR Part 745, "Requirements for Lead-Based paint Activities in Target Housing and Child-Occupied Facilities; Final Rule, August 29, 1996.

Title 24 CFR Part 35, Subpart H, "Disclosure of Known Lead-Based Paint and/or Lead-Based Paint Hazards Upon Sale or Lease of Residential Property," Final Rule, March 6, 1996 (co-listed Title 40 CFR Part 745, "Requirements for Disclosure of Known Lead-Based Paint and/or Lead-Based Paint Hazards in Housing," Final Rule, March 6, 1996).

USAEHA interim Final Report No. 37-26-jk44-92, "Lead-Based Paint Contaminated Debris Waste Characterization Study," May 1992-May 1993.

ACSIM (DAIM-FDF-B) Memorandum, Subject: Policy Guidance - Lead -Based Paint and Asbestos in Army Properties Affected by Base Realignment and Closure, 5 November 1993.

Memorandum, Subject: Lead-Based Paint Contaminated Debris - AEHA Guidance, 29 March 1994.

AR 420-70, "Building and Structures," 1997.

AR 200-1, "Environmental Protection and Enhancement," Chapters 4-6, February 1997.

Public Works Technical Bulletin (PWTB) 420-70-2, "Installation Lead Hazard Management," 1997.

SGPS Memorandum, Subject: Childhood Lead Poisoning Prevention, 26 May 1993.

Ozone-Depleting Chemicals

What Are They?

Ozone-depleting chemicals (ODCs) are manmade compounds that present a serious threat to the Earth's ozone layer. Chlorofluorocarbon (CFC) refrigerants, halons, and solvents are the three categories of ODCs. The most common CFC refrigerant is R-12 — also called freon — which is used in air conditioners and refrigerators on most Army installations. Halons are used extensively as fire-fighting agents and can still be found in Army facilities that house sensitive electronic or other high-value equipment, and in manned weapon systems. ODC solvents, such as methyl chloroform (TCA), CFC-113 and carbon tetrachloride, are commonly used in manufacturing as degreasers and for precision cleaning. They may still be used in some depot industrial operations, as well as in weapon system and vehicle maintenance.

ODCs are stable and when released do not break down until exposed to the high radiation of the upper atmosphere. When this occurs they release chlorine or bromine, which react with ozone and deplete the ozone layer, which protects humans and animals from harmful ultraviolet radiation (UV-B).

Current Regulations

In 1987 the United States joined 120 other nations in signing the Montreal Protocol on Substances that Deplete the Ozone Layer. The Montreal Protocol established caps on the production of halon, freon, TCA and other Class 1 ODCs. Soon after, "ozone holes" were discovered over the North and South poles. In 1990, the Protocol was amended to ban the production of Class 1 ODCs in developed countries after the year 2000. This was codified in Title VI of the **Clean Air Act Amendments of 1990**. Sections 608 and 609 of that Act also levy training, certification and operating requirements on technicians who service and maintain equipment using ODCs or ODC alternatives. On February 11, 1992, President Bush accelerated the ban on domestic production to December 31, 1993 for halons and December 31, 1995 for all remaining Class 1 ODCs. These dates were later accepted by all developed Protocol signatories through ratification of the Copenhagen Amendments of 1994.

In 1992, Congress passed legislation that levied restrictive taxes on the sale, import, and storage of Class 1 ODCs. The same year, Congress included ODC language in the **National Defense Authorization Act for Fiscal Year 1993** (Public Law 102-484), specifically prohibiting requirements for ODCs in Department of Defense contracts. This prohibition extends to the purchase of ODCs for use in weapon systems and facilities. Exceptions require a technical certification of need and the signature of a general officer or civilian equivalent. The services report every exception to Congress.

The Army's Program

The Army Acquisition Pollution Prevention Support Office (AAPPSO) centrally manages the Army ODC Elimination Program under authority of the Assistant Secretaries of the Army for Research, Development, and Acquisition (ASA(RDA)) and Installations, Logistics, and Environment (ASA(IL&E)).

Objectives . . .

Eliminate Army dependency on Class I ODCs quickly and efficiently through strategies that include:

- Centralized program management in AAPPSO and decentralized execution.
- Relying on industry for alternatives to the maximum extent possible.
- Eliminating all dependency on ODC use through conversion or retrofit.
- Conserving and reusing ODCs installed in Army equipment.
- Replacing, recovering and turning in (to the Army ODC Reserve) of all halon 1301 installed in facilities' fixed fire-suppression systems.
- Turning in all excess ODC material to the Army ODC Reserve.
- Requiring EPA approval of all alternative chemicals through the Significant New Alternatives Policy (SNAP) review process.
- Requiring toxicity clearance from the Army Surgeon General for all alternatives.

Commanders Should . . .

- Insist that all contracts are reviewed and ODC approvals are processed in compliance with Section 326 of Public Law 102-484.
- Comply with the technician training and certification requirements of Sections 608-609 of the Clean Air Act of 1990.
- Verify that facilities' halon 1301 and ODCs, when identified as excess, are turned in to the Army ODC Reserve.
- Confirm elimination Class I ODCs by the end of fiscal year 2003.
- Expedite elimination of ODCs in weapon systems and industrial processes as rapidly as technology will allow.
- Require all chemicals considered as ODC alternatives to receive EPA SNAP approval and Surgeon General toxicity approval before use.

References

ASA (IL&E) Memorandum, "Ozone-Depleting Chemicals (ODC) Elimination at Army Installations," 13 February 1996.

Strategic Guidance and Planning for Eliminating Ozone-Depleting Substances from U.S. Army Applications, October 1995.

ASA (IL&E) Memorandum, "Disposition of Excess Ozone-Depleting Substances (ODS) at Army Installations," 18 October 1994.

DASA(P) Memorandum, "Ozone-Depleting Substances," 2 July 1993.

USACE Guidance Memorandum, "Chlorofluorocarbon (CFC) Refrigerants in Operation and Maintenance," March 1992.

Pesticides and Pest Management

What Are They?

A pest is any organism (such as an insect, rodent, bird, weed, fungus or microorganism) that can injure or lower the well-being of people and their pets, damage property and natural resources, or otherwise threaten the ability of commanders to accomplish their missions.

Pesticides are substances, or mixtures of substances (including biological agents), that are used to destroy, repel or otherwise prevent damage by pests. These substances are commonly named after the specific group of pest they are designed to control; such as insecticide, herbicide, fungicide, rodenticide or plant growth regulator.

Pesticides often are toxic chemicals that must be stored and handled with care. Unlike many toxic chemicals, however, pesticides must be released into the environment to be effective, and some degree of environmental exposure is unavoidable. Depending upon the properties and patterns of use, specific pesticides may contact or accumulate in the atmosphere, soil, surface water and groundwater, and untargeted plants and animals. Thus, it is important to use pesticides only in ways that prevent or minimize risks of unwanted environmental exposure.

Pesticides are also unique among potentially toxic chemicals in that their usefulness can be reduced or eliminated by resistance of targeted pests. This often happens when pesticides are applied inappropriately.

Modern pest-control strategies have abandoned wholesale use of pesticides in favor of more sophisticated approaches, in which pesticides are among several tools used to eliminate or reduce damage by pests. One approach, commonly known as Integrated Pest Management (IPM), demands full use of information about the biology of a target pest and its environment. It also calls upon engineering, cultural, genetic and other disciplines for overall control. The Department of Defense is committed to IPM as the best approach to control pests while meeting presidential guidelines for reducing environmental risks from toxic chemicals by the end of the decade.

Current Regulations

The EPA regulates pesticides through its Office of Pesticide Programs (OPP). Two statutes are administered in this program: The **Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) of 1972**, which established the registration procedures for pesticide products, and the **Federal Food, Drug and Cosmetic Act (FFDCA)**, which governs pesticide residue levels in food and feed crops.

Executive Order 12856, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements," tasks heads of federal agencies to develop goals to reduce releases of toxic chemicals to the environment by 50 percent by December 31, 1999.

Under FIFRA, the EPA regulates the use of chemical pesticides and establishes training standards and procedures for personnel who handle these pesticides. The EPA has authorized DoD to specify training and certification requirements for personnel who apply pesticides on DoD property. DoD also has entered into formal agreements with the EPA to support the goals and objectives of Executive Order 12856 through the Pesticide Environmental Stewardship Program, and has committed to reduce pesticide releases by 50 percent (from fiscal 1993 levels) by the end of the decade.

DoD policy exceeds EPA and most state standards by requiring detailed records of all pesticide operations at DoD facilities, and that all personnel who apply commercial grade pesticides there be certified.

The Army's Program

Objectives . . .

- Develop and administer safe and effective pest management programs at each installation by using IPM techniques to help minimize resistance and the risks of environmental damage from pesticide applications.
- Promote command training and contingency goals and objectives.
- Protect real estate and natural and cultural resources from pest-related damage.
- Limit health risks from injury and disease from pests and the diseases they carry.
- Reduce environmental risks from chemical pesticides.
- Prevent introduction or spread of medical and economic pests within areas occupied by United States forces.

Commanders Should . . .

- Designate a professionally trained pest management coordinator to ensure that all installation pest management regulatory and reporting requirements are met.
- Prepare and submit an installation Pest Management Plan for MACOM approval that addresses all organizations and activities, including outlease and outgrant programs, that require applications of pesticides.
- Staff pest management programs with a sufficient number of DoD-certified pesticide applicators, supervisors and contract quality assurance evaluators, to make sure pesticides are handled and applied in accordance with government health and environmental requirements.
- Support IPM to help limit risks of pesticide resistance and environmental contamination from excessive applications of pesticides at their installations.
- Ensure that pest management activities are referenced in other installation environmental documents (such as Spill Contingency Control Plans or endangered species protection plans) to foster better coordination as part of the installation master planning process.

References

AR 200-1, "Environmental Protection and Enhancement," February 1997.

AR 200-2, "Environmental Effects of Army Actions," December 1988.

DoD Directive 4150.7, "DoD Pest Management Program," April 1996.

AR 40-5, "Preventive Medicine," October 1990.

AR 200-5, "Pest Management," 1997 (in prep).

AR 420-76, "Pest Management," June 1986.

Federal regulations concerning pesticides are contained in Title 40 CFR Parts 152-171 (pesticide labels, handling and training) and Title 7 CFR Part 110 (record-keeping).

POLLUTION PREVENTION

WHAT IS IT?

Army activities such as training, manufacturing, testing, maintenance, research and development, and health services produce a variety of pollutants. Traditionally, the Army captured and reduced these pollutants after they left the stack or discharge pipe. Pollution prevention includes any reasonable mechanism that avoids, prevents, or reduces pollutant discharges or emissions by other means – preferably by reducing the use of hazardous materials and reducing wastes at their source.

There are several reasons why the Army stresses pollution prevention, or "P2." Disposed hazardous waste, water discharges and air emissions all have been associated with environmental contamination. The Defense Department has spent billions of dollars cleaning up environmental effects of the past, and the cost of complying with current waste disposal regulations, wastewater treatment standards and air pollutant emission limits continues to rise. Environmental regulations and Army policy make pollution prevention an integral part of strategies to protect health and the environment.

CURRENT REGULATIONS

The Resource Conservation and Recovery Act (RCRA) requires hazardous waste generators to implement an economically feasible program to reduce the volume or toxicity of hazardous waste. This requirement is the basis for hazardous waste minimization, or HAZMIN. Generators must report steps taken to minimize waste generation in biennial reports to the Environmental Protection Agency.

The **Clean Air Act Amendments** impose a strict schedule for controlling emissions of 189 hazardous air pollutants, and encourage voluntary source reduction by providing incentives to facilities that reduce emissions ahead of schedule. Section 313 of the **Emergency Planning and Community Right-to-Know Act (EPCRA)** requires annual reporting of more than 600 toxic chemicals after a reporting threshold is met. The data include pounds-per-year released to air, water, or land, and transferred for treatment.

Certain executive orders require solid waste reduction, recycling and energy conservation. Federal agencies must reduce pollutants by 50 percent between 1994 and 1999 (based on 1994 levels for federal facilities). Any federal facility subject to EPCRA reporting must have had a written Pollution Prevention Plan by December 31, 1995.

The **Pollution Prevention Act of 1990** promotes source reduction as the most effective form of preventing pollution. This act required Toxics Release Inventory reports to include source reduction and recycling measures for each reported chemical.

Pollution Prevention Methods

(Ranked by the EPA according to environmental and economic benefit).

Source reduction. This includes substituting materials and changing processes to avoid the use of hazardous substances.

In-process recycling (also known as "closed loop"). If hazardous materials must be used, they should be reused in the same processes whenever possible.

Open loop recycling (sometimes called "off-site"). Materials no longer useful in a process should be reclaimed or used to recover energy.

Materials and residues that cannot be recycled must be treated and disposed of to prevent risks to human health and the environment.

The Army's Program

Objectives . . .

Strategic Goal: Adopt and implement integrated management approaches, procedures, and operations in all mission areas to minimize environmental contamination and pollution.

Waste Reduction:

- Reduce the release and disposal of toxic chemicals by 50 percent between 1994 and 1999.
- Reduce solid waste generation, improve recycling and conserve energy.

Hazardous Material Management:

- Improve methods for tracking hazardous material inventories.
- Prevent spills and needless disposal of expired material stocks through better inventory control and material handling.
- Facilitate effective cooperation between materiel developers and weapon system managers and environmental teams.

Prevention in Acquisition:

- Review military specifications (MILSPECs) and other hazardous materials.
- Seek pollution prevention opportunities during all phases of weapon systems' life cycles, especially during design and development.

Pollution Prevention Ethic:

- Accomplish every Army mission with the environment in mind.
- Make preventing pollution the way the Army does business through strong command support, training and public awareness.

COMMANDERS SHOULD . . .

- Establish a strong pollution prevention program.
- Emphasize the pollution prevention ethic across all organizations and echelons of command.
- Survey their facilities to determine the sources, types, and amounts of hazardous waste generated, air pollutants released, solid waste disposed, and wastewater discharged.
- Reduce pollution sources by determining areas where material substitutions, process changes or re-engineering can reduce hazardous materials before recycling, treatment or disposal.
- Maintain an up-to-date installation Pollution Prevention Plan.

REFERENCES

AR 200-1, "Environmental Protection and Enhancement," February 1997.

Title 40 CFR Part 262.41 and appendices detail HAZMIN requirements under RCRA.

Title III, Clean Air Act Amendments of 1990 (Public Law 101-549) details the source reduction requirements for hazardous air pollutants.

EPA/625/7-88/003, "Waste Minimization Opportunity Assessment Manual," July 1988.

USAEHA, Technical Guide No. 178, "A Commander's Guide to Hazardous Waste Minimization at Army Health Care Facilities," February 1990.

Executive Order 12856, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements."

Executive Order 12873, "Federal Acquisition, Recycling, and Waste Prevention."

Executive Order 12902, "Energy Efficiency and Water Conservation at Federal Facilities."

RADON

WHAT IS IT?

Radon is a colorless and odorless radioactive gas released by the natural degradation of uranium. It can be found in high concentrations in soils and rocks containing uranium, granite, shale and phosphate. The only known health effect associated with exposure to elevated levels of radon is an increased risk of developing lung cancer, and this depends upon the concentration and the duration of exposure. Evidence also suggests that smokers are at higher risk from radon exposures than nonsmokers.

Outdoor air naturally contains radon in concentrations of 1 picocurie per liter (pCi/L), with average concentrations of about 0.5 pCi/L. Although these levels are not considered to be of concern, radon can concentrate inside homes or buildings to levels exceeding several hundred pCi/L. Radon gas can enter buildings through dirt floors, cracks in concrete floors and walls, floor drains, sumps, joints, and tiny cracks or pores in hollow-block walls.

CURRENT REGULATIONS

There are no federal regulations relating to radon in the home or workplace. However, the Environmental Protection Agency (EPA) endorses the idea that indoor radon exposure levels greater than 200 pCi/L require immediate mitigation actions. Additionally, based on current information, the EPA believes that indoor radon concentrations can be reduced to 4 pCi/L in most homes. The Army's action level is 4 pCi/L.

Individual states have laws requiring certification and licenses for people who test for radon or perform radon mitigation activities.

The Army Program

Objectives . . .

- Implement the Army radon program.
- Implement the Army Radon Assessment Plan, designed to measure by priority the radon levels in schools, day care centers, hospitals, housing, offices and other structures.
- Identify structures with indoor radon levels greater than 4 pCi/L and implement mitigation actions to reduce levels to 4 pCi/L or less.
- Implement the Army Radon Mitigation Plan, specifying deadlines for mitigation based on radon levels.

Commanders Should . . .

- Incorporate radon mitigation techniques in new construction.
- Maintain a database of radon assessment and mitigation data.
- Budget for the measurement of radon in structures and mitigation of elevated levels.

References

AR 200-1, "Environmental Protection and Enhancement," February 1997.

USAEHA Technical Guide No. 164, "The Department of the Army Radon Program," 19 September 1989.

The following materials are available from your Federal Facility Coordinator:

- OPA-86-004, "A Citizen's Guide to Radon," August 1992.
- OPA-87-010, "Radon Reduction Methods," September 1987.
- USACPW Technical Guidance on Radon, December 1992.
- EPA/400/1-88/004, "The Inside Story: A Guide to Indoor Air Quality," September 1992.
- EPA/520/1-87-20, "Radon Reference Manual," September 1987.

Real Property Transaction and Base Closure

What Are They?

Transactions of Army real property include sales, leasing arrangements, temporary tenancy, grants, transfers and exchanges. Property transfers have gained significance in recent years for both private industry and government agencies. Many instances of unknowing acceptance of contaminated property have raised serious legal and liability issues. Therefore, the Army recently revised the regulations governing real property transactions, establishing requirements to prevent environmental contamination, minimize the potential for personal and Army liability, and provide adequate environmental restoration if needed.

The environmental restoration portion of the Base Realignment and Closure (BRAC) program was established to help identify, investigate, and remediate contamination on installations identified for sale under the auspices of the Base Closure and Realignment Commission Report of December 1988 and subsequent commissions, as authorized by the **Base Closure Act of 1990**.

The process consists of the following environmental restoration phases:

Environmental Baseline Survey – This study of the environmental conditions of Army-controlled properties focuses on hazardous substances or other regulated hazards. It includes former Enhanced Preliminary Assessment and **Community Environmental Response Facilitation Act (CERFA)** requirements.

Environmental Investigation – These tools, such as the remedial investigation/feasibility study (RI/FS) and the RCRA Facility Investigation (RFI), determine the nature and extent of contamination and recommend the best strategy for remediation or cleanup.

Remedial Action (RA) – This is the remediation necessary before property transfer.

Current Regulations

Several regulations and memos describe environmental responsibilities during real property transactions, including: AR 200-1, Chapter 15-6; AR 385-64, Chapter 12; AR 405-10 (acquisitions); AR 405-80 (outgrants); AR 405-90 (disposals); and a memorandum from the Deputy Secretary of Defense regarding "Disposal of Real Property at Closing and Realigning Bases," dated 9 September 1993.

Title 42 USC (United States Code) 9620 (h) and Public Law 102-426, CERFA, address requirements for reporting hazardous substance activity when selling or

transferring federal real property. In addition, current DoD memoranda provide guidance for preparing appropriate documentation for the Environmental Baseline Survey (EBS), Finding of Suitability to Transfer (FOST) and Finding of Suitability to Lease (FOSL). DA PAM 200-1 also contains guidance on documentation.

These regulations set the procedures for conducting and processing an EBS (which replaced the Preliminary Assessment Survey) and subsequent FOSTs for sales divesting title, transfers of jurisdiction, and permits, or FOSLs for outgrants with the exception of licenses and minor easements. The purpose of these requirements is to protect both parties involved in real property transactions and to make sure any contaminated property is adequately restored.

Legislation has been enacted to accelerate property transfer. CERFA outlines the process for identifying uncontaminated property. Parcels concurred by regulators to be uncontaminated (under CERFA definitions) are considered to be available for immediate reuse or transfer.

Section 331 of the Fiscal Year 1997 Defense Authorization Act expanded the CERFA definition of "uncontaminated" to include property where storage of hazardous substance has taken place without incident of a spill or release. Section 334 of the same act amended Title 42 USC 9620(h) by allowing property to be transferred before full and successful operations of remedial actions. A commitment and schedule for cleanup is required along with governor or EPA administrator authorization for deferral of the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)** covenant (stating that all necessary cleanup actions have been taken).

Base Closure policy for overseas bases is radically different than that of CONUS bases and is set by international treaty and the Secretary of Defense (see references).

The Army's Program

Objectives . . .

- Document the environmental status of all real property transactions at the time of the transaction.
- Minimize the liability of the government (and individuals) in any real property transaction.
- Adequately restore any contaminated real property.

Commanders Should . . .

- Ensure all real property transactions comply with Title 42 USC 9620 (h), Public Law 102-426 (CERFA), AR 200-1, AR 405-80, AR 405-90, and DA PAM 200-1.
- Verify compliance with NEPA and AR 200-2 in all real property transactions.
- Conduct and process an EBS and subsequent FOST/FOSL for each real property transaction.

References

AR 200-1 and DA PAM 200-1, "Environmental Protection and Enhancement," February 1997.

AR 200-2, "Environmental Effects of Army Actions," December 1988.

AR 385-64, "Ammunition and Explosives Safety Standards," May 1988.

AR 405-10, "Acquisition of Real Property and Interests Therein," May 1970.

AR 405-80, "Granting Use of Real Estate," February 1979.

AR 405-90, "Disposal of Real Estate," May 1985.

42 USC 9620 (h), "Reporting Hazardous Substance Activity When Selling or Transferring Federal Real Property," April 1990.

Public Law 102-426, "The Community Environmental Response Facilitation Act (CERFA)," October 1992.

DoD, "BRAC Cleanup Plan (BCP) Guidebook," Fall 1993.

Memorandum, Office of the Deputy Secretary of Defense, "Disposal of Real Property at Closing and Realigning Bases," 9 September 1993.

Base Closure Act of 1990.

Public Law 100-526, "Defense Authorization Amendments and Base Closure and Realignment Act," October 1988.

Fiscal Year 1997 Defense Authorization Act.

Solid Waste Management

What Is It?

Nonhazardous solid waste, as defined and regulated under the **Resource Conservation and Recovery Act (RCRA)**, consists of many types of waste including: municipal solid waste, construction wastes, some municipal sewage sludge, industrial and commercial "nonhazardous" waste, as well as some semi-solid and liquid wastes. Solid waste requiring special handling includes such things as household hazardous wastes, incinerator ash, medical infectious waste, and oil and gas.

Environmental Protection Agency (EPA) studies have revealed that more than 11 billion tons of solid waste is generated each year in the United States, and about 227,000 disposal units receive solid waste. These facilities include surface impoundment, municipal sewage sludge land application units, and landfills. Before landfilling, other processes or treatment practices are employed to reduce the volume requiring disposal. These processes include (in preferential order): source reduction, reuse, recycling, composting, incineration, or combustion in a waste-to-energy facility. Historically, landfills have provided the least expensive way to dispose of solid waste. However, the cost of landfilling municipal solid waste went up with the EPA's promulgation of solid waste disposal regulations in October 1991. The regulations became effective in October 1993 (certain small, isolated landfills in arid states were extended until October 1995) and costs are expected to continue rising.

Current Regulations

Nonhazardous solid waste is managed in accordance with Subtitle D of RCRA. In October 1991, the EPA promulgated regulations establishing criteria for municipal solid waste landfills. These regulations include requirements for location restrictions, facility operation and design, groundwater monitoring, corrective actions, and closure/post-closures. The EPA has delegated authority to states, meeting certain requirements, to implement this program. This is similar to the RCRA hazardous waste program and will result in increased costs for municipal solid waste management and disposal.

State and local governments enact regulations related to the management of Subtitle D wastes. For instance, many states require permits for solid waste landfills and composting operations. Authorities promote increased use of product separation, source reduction, recycling, and composting to reduce the volume of solid waste requiring disposal under Subtitle D. It is the commander's responsibility to take the actions necessary to comply, because military

installations' immunity from state and local environmental regulations has been waived in many instances by the **Federal Facility Compliance Act** and other laws.

Two executive orders also spell out solid and hazardous waste requirements. **Executive Order 12856**, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements," requires installations to inform the public about the hazardous substances and toxic chemicals they store and to reduce 1994 levels of toxics by 50 percent by 1999. **Executive Order 12873**, "Federal Acquisition, Recycling, and Waste Reduction," addresses the entire solid waste cycle by requiring waste reduction targets, recycling goals and an affirmative program to purchase recycled and environmentally preferable products.

Army installations must also comply with Army Regulation 420-49, "Facilities Engineering Utilities and Services Guide" (dated 28 April 1997), which superseded AR 420-47, "Solid and Hazardous Waste Management." This regulation addresses collection, storage, processing and disposal of solid wastes and hazardous wastes. It also specifies the responsibilities of the commander and other installation personnel in the planning and administration of the installation Integrated Solid Waste Management (ISWM) program. As part of an ISWM program, an installation may establish a recycling program, which, in addition to reducing the volume of solid waste requiring disposal, may provide income or cost savings to the installation. All proceeds from sales of recyclable materials are returned to installations with qualifying recycling programs. After the program operating costs have been recovered, the remaining proceeds are available to finance projects or pollution abatement, energy conservation and occupational safety and health activities, as well as morale, welfare and recreation programs.

Hazardous waste disposal is handled in accordance with AR 200-1. Disposal of hazardous and medical infectious wastes is the responsibility of the generator.

The Army's Program

Objectives . . .

- Reduce, reuse and recycle solid waste to the greatest extent possible.
- Pursue the use of joint or regional solid waste management programs and facilities with federal and non-federal agencies.
- Privatize solid waste management facilities or contract for waste disposal services, including recycling.
- Cooperate to the extent practicable in recycling programs conducted by the civilian community (on installations that do not have recycling programs).

Commanders Should...

- Establish and execute an Integrated Solid Waste Management program.
- Establish programs to reduce waste production and increase reuse, recycling and composting.
- Monitor and control the amount and appropriateness of waste needing incineration or landfilling.
- Encourage programs for safe, timely and documented collection, storage and disposal of hazardous and medical infectious wastes.

References

AR 200-1, "Environmental Protection and Enhancement," February 1997.

AR 420-49, "Facilities Engineering Utilities Services Guide," April 1997.

Executive Order 12856, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements."

Executive Order 12873, "Federal Acquisition, Recycling, and Waste Reduction."

Title 40 CFR Parts 240-258 contain solid waste management regulations.

Threatened and Endangered Species Management

What Is It?

The **Endangered Species Act of 1973 (ESA)** protects fish, wildlife and plants that have been determined to be threatened or endangered by the Secretary of Interior or Secretary of Commerce. This determination is based solely on the best scientific data available. The ESA defines "endangered species" as those in danger of extinction throughout all or a significant portion of their range. "Threatened species" are those likely to become endangered in the foreseeable future. The list of endangered and threatened species (listed species) is published in the Federal Register.

The ESA requires federal agencies to carry out programs for the conservation of listed species. The ESA defines "conservation" as the use of all methods and procedures necessary to bring endangered or threatened species to the point at which ESA protection measures are no longer required.

The ESA also requires that federal agencies ensure their actions are not likely to jeopardize the existence of endangered or threatened species nor adversely modify "critical" habitat. The Army must formally consult with the National Marine Fisheries (NMFS) or the U.S. Fish and Wildlife Service (FWS) before taking any action that may affect, adversely or beneficially, a listed species or cause adverse modification of designated critical habitat. Joint FWS and NMFS regulations describe consultation procedures.

The ESA prohibits anyone from "taking" a listed fish and wildlife species unless permitted by the ESA. "Take" is broadly defined by the ESA to include most activities that harass or harm listed fish and wildlife species. "Harm" is further defined as an act that kills or injures species. Harm may include significant habitat modification or degradation when it impairs essential behavioral patterns (such as breeding, feeding or sheltering). Additionally, the ESA makes it unlawful to remove or to maliciously damage or destroy any listed plant in areas under federal jurisdiction.

States have their own lists of threatened and endangered species, which the Army must consider when planning land management activities.

On many installations ESA enforcement is a large part of a well integrated natural resources management program. Further, failure to comply with the ESA may result in the disruption of soldier training or other

Army mission activities. Army personnel who violate the ESA or its implementing regulations could face civil and criminal penalties. The law imposes penalties for both the knowing failure to take required action and the commission of prohibited acts.

The Army's Program

Objectives . . .

- Develop and implement programs to protect and preserve state and federal threatened and endangered species and their critical habitat.

Commanders Should . . .

- Plan land use to avoid adverse effects on threatened and endangered species.
- Conduct installationwide surveys to identify and document the locations of listed endangered species and candidates for listing, and their habitats.
- Perform biological assessments for major construction projects and other activities, such as military training, to assess the effects on listed species and their habitats.
- Work closely with the FWS and NMFS in planning installation activities and initiate formal consultation for activities that may affect listed species or critical habitats.
- Prepare plans to manage endangered species and ensure that adequate funds and personnel are provided to carry them out.
- Monitor installation compliance with Endangered Species Management Plans and progress toward conservation goals through internal and external assessments and annual review by the Environmental Quality Control Committee.

References

AR 200-1, "Environmental Protection and Enhancement," February 1997.

AR 200-3, "Natural Resources - Land, Forest and Wildlife Management," February 1995.

Joint FWS and NMFS regulations implementing the Endangered Species Act are contained in Title 50 CFR Part 402. The lists of endangered and threatened wildlife and plants are contained in Title 50 CFR Parts 17.11 and 17.12, respectively; the designated critical habitats are listed in Title 50 CFR Parts 17.95 and 17.96.

Storage Tank Systems: Underground Tanks (USTs) and Above Ground Tanks (ASTs)

What Are They?

Storage tanks systems can be above ground (ASTs), underground or partially underground (USTs).

A tank is defined in 40 CFR 260.10 as a stationary device designed to contain hazardous waste and constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) that provide structural support. A tank system includes the storage or treatment tank and its associated ancillary equipment and containment system. The regulation defines an AST as a tank situated in such a way that its entire surface area (including the bottom) is above the plane of the adjacent surrounding surface and can be visually inspected.

For more than 50 years, USTs have been widely used throughout the nation to store petroleum products, chemicals and wastes. Most of these tanks contain petroleum products such as gasoline or oil.

The Environmental Protection Agency (EPA) estimates that 25 percent of the hundreds of thousands of USTs nationwide may be leaking. Tests at Army installations over the past few years also have shown about 25 percent of Army USTs to be leaking.

The nation draws about half of its drinking water from groundwater sources. Leaking underground storage tanks have contaminated many drinking water sources and cleanup from a leaking UST can cost $100,000 or more.

USTs don't have to be totally underground to be regulated. Generally, regulated USTs are those that have 10 percent or more of their volume underground (including the piping) and exceed 110 gallons capacity.

Current Regulations

USTs

In 1984, Congress added Subtitle I to the **Resource Conservation and Recovery Act (RCRA)**, establishing a comprehensive regulatory program for USTs containing "regulated substances." The EPA regulates this program under Title 40 CFR (Code of Federal Regulations) Part 280. In addition, many states have enacted UST regulations.

Specific requirements vary depending on the contents of tanks. Generally, tanks must meet specific installation standards and requirements for corrosion protection, spill/overfill prevention and leak detection. By December 20, 1998, all tanks must have

corrosion protection, spill/overfill prevention and leak detection. The regulations establish strict timetables for retrofitting USTs depending on their age, contents and construction.

Subtitle C of RCRA establishes requirements for managing hazardous wastes. The requirements for tank systems storing hazardous wastes are detailed in Title 40 CFR Parts 264, Subpart J and 265, Subpart J. The regulations for these tank systems apply to both underground and above-ground units. Note that a tank system assessment is required when installing new tank systems. This applies to those systems at treatment, storage and disposal facilities (TSDFs) and those systems used for waste accumulation under Title 40 CFR Part 262.34.

ASTs

Above ground systems have been guided by National Fire Protection Association standards (NFPA-30), Title 40 CFR Part 112, Spill Prevention, Control and Countermeasure Plan (SPCCP) for POL tanks, and applicable sections of various (and predominantly local) building and structural codes.

The Army's Program

Objectives . . .

- Inventory all tanks worldwide annually.
- Identify all leaking tanks and take corrective action to minimize environmental impacts.
- Comply with federal and state requirements.
- Transition, when appropriate and feasible, from USTs to ASTs.

Commanders Should...

- Notify the appropriate state or local agency and HQDA of existing or new USTs.
- Provide leak tests for all USTs and initiate corrective action for all leaking tanks.
- Remove all abandoned tanks.
- Install new tanks that meet standards.
- Retrofit ASTs with secondary confinement.

REFERENCES

Federal regulations for storage of hazardous waste in tanks are addressed in Title 40 CFR Parts 264 and 265.

Federal UST regulations for storage of regulated substances are addressed in Title 40 CFR Parts 280.

Current Army policy and guidance documents for procedures concerning inventory control practices include:

AR 710-2, "Supply Policy Below the Wholesale Level."

DA PAM 710-2-1, "Using Unit Supply Manual."

DA PAM 710-2-2, "Supply Support Activity Supply Manual."

Other useful publications providing detailed instructions on inventory control procedures include:

FM 10-69, "Petroleum Supply Point Equipment and Operations."

FM 10-18, "Petroleum Terminal and Pipeline Operations."

API Guidance Manual 1621, "Bulk Liquid Stock Control at Retail Outlets."

TM 5-678, Petroleum, Oils and Lubricants: Repairs and Utilities (outlines general maintenance requirements).

AR 200-1, "Environmental Protection and Enhancement," February 1997.

EPA Office of Underground Storage Tanks, "Musts for USTs: A User's Guide to Regulations for Underground Storage Tank Systems," August 1988.

U.S. Army Toxic and Hazardous Materials Agency (USATHAMA), "Compliance Guide for Existing Underground Storage Tank Systems," June 1990.

EPA-510-B-94-007, "Guide to EPA Materials on Underground Storage Tanks," September 1994.

EPA-510-K-95-003, "Straight Talk on Tanks: Leak Detection Methods for Petroleum Underground Storage Tanks and Piping," July 1995.

Wastewater Management

What Is It?

A typical installation generates wastewater from sanitary uses, industrial processes, and stormwater runoff. Adequate treatment of these waste streams maintains the quality of the water receiving the wastes.

Current Regulations

The object of the **Federal Water Pollution Control Act**, as amended by the **Clean Water Act (CWA) of 1977** (and other amendments through 1987), is to restore and maintain the chemical, physical and biological integrity of the nation's navigable waters.

The CWA regulates both domestic and industrial wastewaters. Under CWA, the Environmental Protection Agency (EPA) has established standards for direct and indirect wastewater discharges, stormwater runoff, sewage sludge use and disposal practices. The primary tool for wastewater compliance is through National Pollutant Discharge Elimination System (NPDES) permits.

Pollutant discharges from any point source into waters of the United States require a NPDES permit. This applies to facilities that treat industrial or domestic wastewaters. NPDES permits typically specify concentration limits of various pollutants that can be discharged from the permitted facility.

For certain industries (known as categorical industries), the EPA has established effluent limitations or categorical standards. If a facility does not qualify as a categorical industry, permit limits are developed by the regulatory authority based on potential adverse impacts of pollutants to the receiving water. NPDES permits also require that the effluent be routinely sampled and analyzed and results reported to permitting authorities.

Biomonitoring is a common requirement in NPDES permits to identify any toxicity problems. Permits may also require pollution prevention or "best management practices" to further reduce the amount of toxins entering the treatment facility and/or receiving water.

An important component of the NPDES permitting process is the pretreatment program, which sets standards for the control of effluent from indirect discharges, or industrial sources of pollution that discharge effluent through publicly or federally owned treatment works. Industrial users must comply with three types of pretreatment standards: categorical standards, specific prohibitions, and local limits. Categorical pretreatment standards have been established by the EPA and apply to all industrial users. Specific prohibitions are general standards established by the EPA and apply to all industrial users. States and local municipalities may set additional limits on indirect discharges to protect the wastewater treatment facility.

NPDES permits are required for stormwater runoff from certain industrial and construction activities. These permits require the regulated activity to develop and implement a Stormwater Pollution Prevention Plan. The plan describes materials-management measures that reduce or eliminate stormwater pollution. Common regulated activities at Army installations include motor pools, Defense Reutilization and Marketing Office yards, and landfills.

The CWA also regulates sewage sludges generated from domestic wastewater treatment plants. These regulations address requirements for those sewage sludges that are applied to land, placed on a surface disposal site, or fired in a sewage sludge incinerator.

The Army's Program

Objectives . . .

- Control or eliminate sources of pollutants discharged to surface or underground waters though conventional or innovative treatment systems.
- Demonstrate leadership in attaining the national goal of zero discharge of water pollutants.
- Cooperate with regulatory authorities in forming and implementing water pollution control plans.
- Control or eliminate runoff and erosion through sound vegetative and land management practices.

Commanders Should...

- Develop and maintain wastewater monitoring programs to ensure compliance with NPDES permits and regulations.
- Obtain operating permits for treatment facilities.
- Notify the MACOM when new permits are received or new regulations are proposed or issued that will require modification of existing treatment facilities.
- Submit copies of Notices of Violation (NOVs) immediately to the MACOM.

References

AR 200-1, "Environmental Protection and Enhancement," February 1997.

AR 420-49, "Facilities Engineering Utilities Services Guide," April 1997.

Title 40 CFR (Code of Federal Regulations) Parts 122 through 140 contain regulations pertaining to the CWA.

WETLANDS

WHAT ARE THEY?

Wetlands is the collective term for marshes, swamps, bogs and similar areas located between open water and dry land. Wetlands are valuable natural resources that help improve water quality, reduce flood and storm damage, provide fish and wildlife habitat, and support hunting and fishing activities. Two broad categories of wetlands are recognized: coastal wetlands and inland wetlands. Coastal wetlands are found in areas of varying salinity and include unvegetated mud flats, sand flats, marshes, estuaries and mangrove swamps. Inland wetlands are common on flood plains along rivers and streams, in isolated depressions surrounded by dry land, and along the margins of lakes and ponds.

CURRENT REGULATIONS

All federal land management agencies are responsible for protecting wetland resources. The major federal wetlands regulations are jointly administered by the U.S. Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA). The **Clean Water Act (CWA)** established a permit program to regulate the discharge of dredged and fill material into waters of the United States, including most wetlands. The U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service have important advisory roles in the permit review process. Section 404 of the CWA authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits for the discharge of dredged or fill material into "waters of the United States." The "waters of the United States" is the broad term for wetlands, coastal and inland waters, lakes, rivers, streams and prairie potholes. The terms dredged or fill material includes return water from dredged material disposed on the upland and generally any material (such as rock, sand or dirt) used to fill in wetlands during the construction of roadways, erosion protection and site development.

The Corps issues Section 404 permits under various forms of authorization. These include individual permits and general permits.

Individual permits require that a formal application be completed and submitted to the Corps and the appropriate state agency. Once a complete application is received by the Corps, the formal review process begins. The Corps issues a public notice, evaluates the impacts of the project and all comments received, and negotiates necessary modifications to the project, if required. A permit decision document is then prepared and forwarded to the district or division engineer for signature.

General permits refer to regional permits and nationwide permits. Regional general permits and associated stipulations are issued by district or division engineers on a regional basis for those projects identified as being similar in nature and causing only minimal individual and cumulative environmental impacts. Nationwide permits are issued by the Chief of Engineers through publication in the Federal Register and, naturally, apply nationwide. The nationwide permits are found in Title 33 CFR (Code of Federal Regulations) Part 330. Contact your local Corps district or division for a listing of the regional general permits.

THE ARMY'S PROGRAM . . .

OBJECTIVES

- Avoid adverse impact to existing aquatic resources; offset unavoidable impacts.
- Strive to achieve no net loss of value or functions of existing wetlands.
- No overall net loss of wetlands on Army controlled lands.
- Protect existing, rehabilitate degraded, restore former and create new wetlands.

COMMANDERS SHOULD . . .

- Inventory installation wetlands.
- Plan land use to avoid damage to wetlands.

REFERENCES

AR 200-1, "Environmental Protection and Enhancement," February 1997.

AR 200-3, "Natural Resources - Land, Forest and Wildlife Management," February 1995.

Executive Order 11990, "Protection of Wetlands," May 1990.

EPA wetlands regulations in Title 40 CFR Part 230: Subpart E, Section 230.41 outline potential impacts of dredged and fill material on special aquatic sites, specifically wetlands.

The regulatory program for USACE is contained in Title 33 CFR Parts 320 through 330.

Army Corps of Engineers Wetlands Delineation Manual, 1987.

WHAT DO THESE ENVIRONMENTAL TERMS MEAN?

AAPPSO - Army Acquisition Pollution Prevention Support Office.

Acid Rain - Acidified precipitation resulting in acidification of lakes and destruction of forests. Believed to be caused by emissions from vehicles and burning fossil fuels.

ACHP - Advisory Council on Historic Preservation.

ACSIM - Assistant Chief of Staff for Installation Management.

ACTS - Army Compliance Tracking System. Now known as the Environmental Quality Report.

AEARC - Army Environmental Awareness Resource Center.

Agricultural Outlease - Use of Defense Department lands under a lease to an agency, organization or person for growing crops or grazing animals.

AHERA - Asbestos Hazard Emergency Response Act (1986). It requires studies to determine the extent of danger to human health from asbestos in public and commercial buildings.

AIRFA - American Indian Religious Freedom Act (1978).

ALMC - U.S. Army Logistics Management College.

AMEDD - Army Medical Department.

AR - Army Regulation.

ARPA - Archeological Resources Preservation Act.

ASA (IL & E) - Assistant Secretary of the Army for Installations, Logistics, and Environment.

ASA (RDA) - Assistant Secretary of the Army for Research, Development, and Acquisition.

Asbestos - A group of natural minerals that tend to separate into strong, heat-resistant fibers. Used as an insulator, it is a suspected carcinogen.

AST - Above ground storage tank.

BACT - Best Available Control Technology.

BCP - Base Realignment and Closure (BRAC) Cleanup Plan.

BCT - BRAC Cleanup Team.

BEC - BRAC Environmental Coordinator.

BMP - Best Management Practice. A "common sense" approach when dealing with a known process. It accounts for operating and process conditions by minimizing the impact on the environment and human health.

BRAC - Base Realignment and Closure.

BTC - Base Transition Coordinator.

CAA - Clean Air Act.

CAAA-90 - Clean Air Act Amendments of 1990. Legislation designed to prevent, control, and abate air pollution from stationary and mobile sources.

Carrying Capacity (Outdoor Recreation) - The maximum amount of recreation activity and number of participants that a land or water area can support in a manner compatible with the objectives of an Integrated Natural Resources Management Plan and without degrading existing natural resources.

Carrying Capacity (Wildlife) - The maximum density of wildlife that a particular area or habitat can sustain without deterioration of the habitat.

CEIHOT - Center for Environmental Initiatives and Hands-On Training.

CEQ - Council on Environmental Quality.

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act (1980). Also known as "Superfund," it regulates cleanup of hazardous waste sites. Amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986.

CERFA - Community Environmental Response Facilitation Act. It outlines the process for identifying uncontaminated property.

CERL - U.S. Army Construction Engineering Research Laboratories.

CFCs - Chlorofluorocarbons. A family of fully halogenated hydrocarbons containing fluorine and chlorine, these environmentally harmful substances deplete the earth's stratospheric ozone layer.

CFR - Code of Federal Regulations.

Chlorine - Chemical used in water purification to remove bacteria.

Coastal Waters - Waters subject to tidal influences.

COB - Command Operating Budget.

Conservation - Wise use and management of natural resources to provide public benefits and continued productivity and quality of life.

CONUS - Continental United States. Environmentally speaking, CONUS refers to any land over which the Environmental Protection Agency has jurisdiction (including Alaska, Hawaii, Puerto Rico, Guam and the Virgin Islands).

Cooperative Plan - Part of the Natural Resources Management Plan that describes how fish and wildlife resources at an installation shall be managed. It is coordinated with the Fish and Wildlife Service and the appropriate state agency.

CPSC - Consumer Products Safety Commission. An agency regulating consumer goods.

Critical Habitat - A designated area declared essential to the survival of a protected species under authority of the Endangered Species Act.

CRREL - U.S. Army Cold Regions Research Engineering Laboratory.

CSA - Chief of Staff, Army.

CTC - Cost-to-Complete. A comprehensive site-by-site estimate of the total cost for completing all environmental cleanup under the Installation Restoration Program.

CWA - Clean Water Act (1972-1987). This act regulates discharge of wastewaters from industrial facilities and sewage treatment facilities such as publicly owned treatment works.

CX - Categorical Exclusion. An exemption to National Environmental Policy Act requirements for Environmental Assessments and Environmental Impact Statements.

DA - Department of the Army.

DASA (ESOH) - Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health).

DASA (P) - Deputy Assistant Secretary of the Army (Procurement).

Db - Decibel. A measure of sound loudness or intensity.

DCSOPS - Deputy Chief of Staff for Operations and Plans.

DDESB - Department of Defense Explosives Safety Board.

DEH - Directorate of Engineering and Housing.

DERA - Defense Environmental Restoration Account, used to fund Department of Defense environmental cleanup activities such as those performed under the Installation Restoration Program.

DERP - Defense Environmental Restoration Program. The general program for environmental cleanup of DoD facilities.

DESCIM - Defense Environmental Security Corporate Information Management.

Dioxin - A highly toxic chlorinated compound often associated with certain herbicides and pesticides but also found in other items such as bleached paper products.

Discharge - Any spilling, leaking, pumping, pouring, emitting, emptying or dumping of a substance.

Disposal - The discharge or placement of any solid waste or hazardous waste into or on land or water.

DoD - Department of Defense.

DOI - Department of Interior.

DOL - Directorate of Logistics.

DOT - Department of Transportation.

DPTM - Directorate of Plans, Training and Mobilization.

DPW - Directorate of Public Works.

DRMO - Defense Reutilization and Marketing Office.

DSERTS - Defense Site Environmental Restoration Tracking System. A Windows-based personal computer program used Armywide to manage, track, and query data on restoration activities.

DSHE - Directorate (Department) of Safety, Health and Environment.

DSN - Defense System Telecommunications Network.

EA - Environmental Assessment. Required by NEPA, a study to determine if significant environmental impacts are expected from a proposed action. Also Environmental Awareness, the ITAM program to teach soldiers wise use of training lands.

EBS - Environmental Baseline Survey. Replaces the Preliminary Assessment Screening (PAS) and covers CERFA requirements.

ECAR - Environmental Compliance Assessment Report. A summary of an installation's compliance status, installation's selective corrective actions, and funding necessary to achieve compliance. It is prepared by an external assessment team in conjunction with the installation environmental staff.

ECAS - Environmental Compliance Assessment System. An assessment program to identify an installation's compliance deficiencies and suggest corrective actions to fix the deficiencies.

EIS - Environmental Impact Statement. A report required by NEPA that describes the environmental consequences of proposed actions.

ELS - Environmental Law Specialist.

Emission Standard - Permissible limit of air emissions established by federal, state and local authorities.

Endangered Species - Species that are in danger of extinction throughout all or a significant portion of their range.

ENF - Enforcement Action.

EPA - U.S. Environmental Protection Agency.

EPCRA - Emergency Planning and Community Right-to-Know Act (1986). Provides local governments with information about possible chemical hazards in the community. Also known as SARA Title III.

EPR Report - Environmental Program Requirements Report. Formerly known as the A-106 and the DB1383, it is the primary way Army managers program and plan the resources they need to execute the environmental program in a manner consistent with congressional, DoD and service priorities.

EQCC - Environmental Quality Control Committee.

EQR - Environmental Quality Report. Formerly the ACTS and DEMIS reports. Provides quarterly information on the compliance status of each environmental program, tracks quantities of hazardous waste generated and tracks costs associated with environmental permit fees and fines.

ER,A - Environmental Restoration, Army. An account used to fund Army environmental cleanup activities such as those performed under the Installation Restoration Program.

ESA - Endangered Species Act (1973). Legislation that protects fish, wildlife and plants that have been determined to be threatened or endangered.

Federal Facilities Docket - Method developed under the Superfund Amendments and Reauthorization Act (SARA) to identify and gather information on federal facilities that manage hazardous wastes or contain contamination from hazardous substances.

FFA - Federal Facilities Agreement. An agreement between the Army, the EPA and state regulators that addresses the completion of all necessary remedial actions at an installation.

FFCA - Federal Facility Compliance Act.

FFDCA - Federal Food, Drug, and Cosmetic Act (1938). It governs pesticide residue levels in food or feed crops.

FIFRA - Federal Insecticide, Fungicide and Rodenticide Act (1972). It regulates the licensing or registration of pesticides.

Flood Plain - Flat area adjacent to a river or stream that is subject to flooding.

FNSI - Finding of No Significant Impact. Also known as a FONSI, it is prepared if the findings of an Environmental Assessment indicate that no significant environmental or socioeconomic impacts are expected from the proposed project, and therefore, an Environmental Impact Statement is not required. It is distributed for public review and comment.

FOSL - Finding of Suitability to Lease.

FOST - Finding of Suitability to Transfer.

FR - Federal Register. A daily federal publication that formally documents proposed and final regulations.

Friable Asbestos - Asbestos that can be crumbled in the hand; its microscopic fibers create a health hazard.

FUDS - Formerly Used Defense Sites.

FWS - U.S. Fish and Wildlife Service.

FY - Fiscal Year.

Game Species - Fish and wildlife that may be harvested in accordance with federal and state laws.

GIS - Geographic Information System.

GOCO - Government-owned, contractor-operated.

Groundwater - Water contained in underground reserves or aquifers.

Halons - A family of fully halogenated hydrocarbons containing bromine. These substances are environmentally harmful because they deplete the earth's stratospheric ozone layer.

HAP - Hazardous Air Pollutant.

Hazardous Materials - Chemicals that have been determined by the Secretary of Transportation to present risks to safety, health, and property during transportation. Also known as HM or HAZMATS.

Hazardous Substance - An element, compound, or mixture that when discharged into land or water poses an imminent and substantial threat to public health and welfare.

Hazardous Waste - Waste that because of its quantity, concentration, or characteristics may pose a substantial hazard to human health or the environment. Also known as HW.

HAZCOMM - Hazard Communication. The responsibilities of managers concerning possible hazards in the workplace and notification of hazards and necessary precautions to their employees.

HAZMIN - Hazardous Waste Minimization.

HMCC - Hazardous Materials Control Center.

HQDA - Headquarters, Department of the Army.

HSMS - Hazardous Substances Management System.

HSWA - Hazardous and Solid Waste Amendments (1984). Amendments to the Resource Conservation and Recovery Act (RCRA) that include regulations on waste minimization, land disposal of hazardous wastes, and underground storage tanks.

I & M - Inspection and Maintenance.

IAG - Interagency Agreement.

IAP - Installation Action Plan. The key document in the management and execution of the Installation Restoration Program (IRP) outlining the total multi-year integrated, coordinated approach to achieving an installations restoration goals.

ICAP - Installation Corrective Action Plan.

ICRMP - Integrated Cultural Resources Management Plan.

INMP - Installation Noise Management Program. The procedures and methods used to manage the impacts of noise on-post and off-post. It incorporates the former Installation Compatible Use Zone (ICUZ) program.

Incineration - Disposal of waste materials through controlled burning.

INRMP - Integrated Natural Resources Management Plan.

IOSC - Installation On-Scene Coordinator.

IPM - Integrated Pest Management.

IPMP - Integrated Pest Management Plan.

IR - Installation Restoration.

IRA - Interim Response Action.

IRDMIS - Installation Restoration Data Management Information System.

IRP - Installation Restoration Program.

IRT - Installation Response Team.

ISCP - Installation Spill Contingency Plan. Document detailing resources and procedures for cleanup of spills of oil and hazardous substances.

ISR - Installation Status Report. ISR Part II (Environment) provides a "macro-level" view of an installation's environmental program, helping commanders justify and prioritize resources.

ISWM - Integrated Solid Waste Management.

ITAM - Integrated Training Area Management.

LBP - Lead-based paint.

LCTA - Land Condition Trend Analysis, the ITAM program to inventory and monitor natural resources, document resource conditions and assess the ability of the land to withstand impacts from training and testing.

LEPC - Local Emergency Planning Committee. Established in local municipalities to prepare a plan for responding to releases of hazardous substances and informing citizens of those major facilities managing hazardous substances in the area.

LRA - Local Reuse Authority.

LRAM - Land Rehabilitation and Maintenance, the ITAM program to restore the land and enhance testing and training realism through revegetation and erosion control.

MACOM - Major Army Command.

MACT - Maximum Available Control Technology. For new and reconstructed plants, MACT is better than or equal to the emission control achieved in practice by the single best controlled similar plant. For existing plants, MACT is better than or equal to the average emissions of the best controlled 12 percent of similar plants.

MBTA - Migratory Bird Treaty Act. The federal law enforcing international conventions for the protection of migratory birds.

MCL - Maximum Contaminant Level. The allowable level of certain organic and inorganic constituents in drinking water.

MILSPECs - Military Specifications.

MR - Military Munitions Rule. The regulations for determining when military munitions become hazardous waste, and providing for safe storage and transportation of such wastes before disposal.

MOA - Memorandum of Agreement.

Monitoring - The sampling or measurement of a contaminant by analytical means.

MSDS - Material Safety Data Sheet. An information sheet describing the potential hazards, chemical or physical properties, and health effects of a substance.

Multiple Use - The use of natural resources for the best combination of purposes to meet the needs of the military and the public.

NAAQS - National Ambient Air Quality Standards. Ambient air standards set by the EPA for designated pollutants, and achieved through State Implementation Plans (SIPs).

NAGPRA - Native American Graves Protection and Repatriation Act of 1990.

National Primary Drinking Water Regulations - These establish the maximum contaminant levels for certain chemicals in drinking water to protect public health.

National Secondary Drinking Water Regulations - Drinking water guidelines for contaminants that affect the aesthetic qualities of water.

National Response Center - The Washington, D.C., headquarters (run by the U.S. Coast Guard) that coordinates activities relative to pollution emergencies.

NCP - National Contingency Plan. Regulations that implement CERCLA provisions for responding to releases of oil and hazardous substances, including cleanup of National Priorities List sites.

NEPA - National Environmental Policy Act (1969). It requires all federal agencies to consider environmental and socioeconomic effects of proposed major actions through preparation of a Record of Environmental Consideration, Environmental Assessment or Environmental Impact Statement.

NESHAP - National Emission Standards for Hazardous Air Pollutants. Allowable emissions of certain hazardous pollutants into ambient air.

NFPA - National Fire Protection Association.

NHPA - National Historic Preservation Act.

Nitrates - Essential soil nutrients that also can be pollutants.

NMFS - National Marine Fisheries Service.

NOI - Notice of Intent. A public notice published in the Federal Register that an Environmental Impact Statement will be prepared and considered. It briefly describes the proposed action and alternatives and describes the proposed scoping process (such as the time and location of the public meetings).

Noise Control Act - The 1972 law regulating noise emissions from commercial products such as transportation and construction equipment.

Nonhazardous Solid Waste - Solid wastes that pose no significant threat to human health or the environment, such as household trash and office waste.

NOV - Notice of Violation. Formal written document provided to an installation by a regulatory agency as a result of environmental non-compliance.

NOx - Nitrogen Oxide.

NPDES - National Pollutant Discharge Elimination System. Program that regulates wastewater discharges to surface waters.

NPL - National Priorities List. The prioritized list of sites to be cleaned up under CERCLA.

O & M - Operation and Maintenance.

OB/OD - Open Burning/Open Detonation.

OCONUS - Outside the Continental United States. From an environmental standpoint this refers to activities on land that is not in the jurisdiction of the EPA (for example, Europe, Korea, Japan).

ODC - Ozone-Depleting Chemical.

ODS - Ozone-Depleting Substance.

OEBGD - Overseas Environmental Baseline Guidance Document.

ODEP - Office of the Director of Environmental Programs.

OMB - Office of Management and Budget.

On-Scene Coordinator - Federal official in charge of removal efforts at hazardous substance discharge sites.

OPP - Office of Pesticide Programs, a division of the EPA.

OSHA - Occupational Safety and Health Administration. Federal agency responsible for regulating worker safety, it establishes guidelines and training requirements for workers at hazardous waste sites and in operations using hazardous materials.

PAO - Public Affairs Office(r).

PAS - Preliminary Assessment Screening. Replaced by the Environmental Baseline Survey (EBS).

PA/SI - Preliminary Assessment/Site Inspection. First phase of the Installation Restoration Program, designed to identify potential sites with hazardous waste contamination.

PCBs - Polychlorinated Biphenyls. Toxic, halogenated organic compounds not easily degraded in the environment.

pCi/L - Picocurie per liter. Unit of measurement for radioactive materials in air; used for measurement of radon concentrations in buildings.

PDSC - Professional Development Support Center (Army Corps of Engineers).

Pesticide - Any product that kills or controls pests.

pH - A measure of a liquid's acid/base properties.

PLS - Planning Level Survey.

POL - Petroleum, Oil and Lubricant.

POM - Program Objective Memorandum.

POTW - Publicly Owned Treatment Works. Type of sewage treatment facility (Army treatment facilities are not considered to be POTWs).

Primary Standards - Standards related to the protection of public health.

PVNTMED - Preventive Medicine Activity.

PWTB - Public Works Technical Bulletin.

RA - Remedial Action. The cleanup phase for hazardous waste sites under CERCLA for the Installation Restoration Program.

RAB - Restoration Advisory Board. A forum of government and community representatives that provides input to the installation commander concerning cleanup at military installations.

Radioactive Material - Any material that spontaneously emits ionizing radiation.

Radionuclide - A radioactive nucleus of a compound or element.

Radon - A colorless, odorless, radioactive by-product from the natural degradation of uranium.

RAP - Remedial Action Plan. Strategy for correcting a site or operation that is not in compliance with regulatory requirements.

RCRA - Resource Conservation and Recovery Act (1976). It establishes guidelines and standards for hazardous waste generation, transportation, treatment, storage, and disposal. Amended by the Hazardous and Solid Waste Amendments (HSWA).

RCS - Report Control Symbol.

REC - Record of Environmental Consideration; also Regional Environmental Coordinator.

Recycling - The process of transforming recovered materials into new or usable products.

Regional Response Center - The federal regional site that controls pollution emergency response activities.

Remediation - Cleanup of a toxic or hazardous waste site.

REO - Regional Environmental Office.

RFA - RCRA Facility Assessment. The RCRA equivalent of a CERCLA preliminary assessment.

RFI - RCRA Facility Investigation. The RCRA equivalent of a CERCLA remedial investigation.

RI/FS - Remedial Investigation/Feasibility Study. Second phase of the Installation Restoration Program where the nature and extent of contamination of a hazardous waste site are determined and cleanup strategies are analyzed.

RMW - Regulated Medical Waste.

ROD - Record of Decision. Official EPA document detailing the strategy for cleanup of a hazardous waste site under the Installation Restoration Program.

RRSE - Relative Risk Site Evaluation. A uniform categorization system that ensures restoration work across DoD is completed first at sites that pose the most risk to human health and the environment.

SARA - Superfund Amendments and Reauthorization Act (1986). It establishes standards for cleanup activities and stipulates the conditions for off-site disposal of wastes.

SDWA - Safe Drinking Water Act (1974). It sets drinking water standards for any pollutants that may have an adverse effect on human health or negatively affect the aesthetic quality of drinking water.

SECARMY - Secretary of the Army.

Secondary Standards - Standards not directly related to human health. They are related to aesthetics, smell and beauty.

SERC - State Emergency Response Commission.

SHPO - State Historic Preservation Officer.

SIP - State Implementation Plan. Developed under the Clean Air Act to delineate methods to achieve the National Ambient Air Quality Standards.

SJA - Staff Judge Advocate.

SNAP - Significant New Alternatives Policy.

SOFA - Status of Forces Agreement.

Solidification - The process of stabilizing waste materials to prevent migration of contaminants.

Solvent - A liquid capable of dissolving solids or other liquids.

SOP - Standard Operating Procedure.

SPCCP - Spill Prevention, Control and Countermeasures Plan. Document that inventories oil and hazardous substance storage and provides procedures to prevent spills and releases of these products.

Surface Water - Above-ground water contained in rivers, streams and the like.

SWMU - Solid Waste Management Unit. Any discernible waste management unit at a RCRA facility from which hazardous constituents might migrate, irrespective of whether the unit was intended for the management of solid waste.

TASC - Training and Audiovisual Support Center.

TB - Technical Bulletin.

TBMED - Medical Technical Bulletin.

TCA - Methyl chloroform, an industrial solvent.

TG - Technical Guide.

Threatened Species - Species likely to become endangered within the foreseeable future throughout all or a significant portion of their range.

TM - Technical Manual.

TRADOC - U.S. Army Training and Doctrine Command.

TRI - Training Requirements Integration, the ITAM program to integrate mission requirements with the carrying capacity of the land. Also stands for Toxics Release Inventory.

TSCA - Toxic Substances Control Act of 1976. Regulates PCBs, CFCs and asbestos. It requires testing of chemical substances entering the environment and regulating releases where necessary.

TSD - Treatment, Storage, Disposal. Hazardous waste operations requiring permits under RCRA.

TSDF - Treatment, Storage, Disposal Facility. A facility involved in hazardous waste TSD operations.

TWA - Time Weighted Average.

USACE - U.S. Army Corps of Engineers.

USACHPPM - U.S. Army Center for Health Promotion and Preventive Medicine.

USACPW - U.S. Army Center for Public Works.

USAEC - U.S. Army Environmental Center.

USAES - U.S. Army Engineer School.

USATCES - U.S. Army Technical Center for Explosives Safety.

USATHAMA - U.S. Army Toxic and Hazardous Materials Agency, now known (since 1993) as the U.S. Army Environmental Center.

USC - United States Code.

USD (A) - Under Secretary of Defense for Acquisition.

UST - Underground Storage Tank. Below or in-ground tank, storing oil or hazardous substances, regulated under RCRA.

VOC - Volatile Organic Compound.

WES - U.S. Army Waterways Experiment Station.

Wetlands - Collective term for marshes, swamps and similar areas that develop between open water and dry land.

Yellow Book - EPA document titled "Federal Facilities Compliance Strategy."

▪ Appendix A ▪

What Questions Should I Ask My Environmental Management Team?

Questions for Your Environmental Coordinator

Overall Installation Program

Environmental program organization and management

Staff structure

Where in the installation staff structure do you work?

How do you bring serious issues to my attention?

How is your staff structured?

Does your organization structure include natural resources, cultural resources, and pest management functions? If not, where are they located?

Do you have sufficient staff and resources to ensure environmental compliance?

Physical plant

Is our environmental office sufficiently automated? Do we have a Geographic Information System(GIS)? Do you have a dedicated machine for each reporting system? Can you access the Internet, send and receive electronic mail?

Do you review DPW work orders for environmental issues?

Do you participate in annual work planning for DPW/Master Plans and Directorate of Plans, Training and Mobilization?

Operations

What is our working relationship with local, state, and federal regulators? When did we last meet with them?

How do we manage our NEPA compliance? Are we in compliance with NEPA? Who prepares RECs and EAs?

Do we have any EISs in the last three years? How do we fund mitigation?

Reporting

When will I see the next ISR Part II results?

How did the last commander use the ISR Part II information?

What Environmental Program Requirements (EPR) projects have we submitted?

Are we having any difficulties getting these approved?

Are these projects reflected in our Planning, Programming, Budgeting and Execution System (Schedule 11) and command operating budget?

What other sources of funding do you use?

How are we requesting funding, to continue ongoing projects, from higher headquarters?

Are we receiving the funding required to continue current work projects?

Do we have any environmental projects that require construction?

Are any of them MC,A (Military Construction, Army) projects?

Do any "non-environmental" projects have environmental components? How are we funding these?

EQCC

Do we have an Environmental Quality Control Committee (EQCC)? How often does it meet?

What organizations are members? Which should be a member that is not?

Does the EQCC act on the full range of environmental issues?

What other group addresses issues that the EQCC doesn't?

What installation environmental issues are important to local community organizations and groups? How do we keep them informed and interact with them?

Compliance

What is our compliance status?

Do we have any current Notices of Violation (NOVs) or Enforcement Actions (EAs)? What is the status of each?

Are any other Army agencies assisting us in resolving them?

Are we under any compliance agreements or consent orders? Do we currently have any compliance agreements or consent orders?

Show me the most recent Environmental Quality Report (EQR).

When was our last Environmental Compliance Assessment System (ECAS) external inspection? By whom? What were the results?

How are we managing corrective actions?

Do we have any other compliance status issues?

Hazardous Materials and Waste Management Program

How much hazardous waste do we generate each month?

Have we experienced any problems with hazardous waste disposal?

Are we implementing a Hazardous Material Control Center?

Are we implementing the Hazardous Substance Management System?

How are we controlling and reducing our inventory of hazardous materials?

Do we use DRMO to dispose of our hazardous waste? Are there any issues?

If not DRMO, who do we use to dispose of hazardous waste?

How do we protect ourselves from future cleanup liability?

What units and processes are the major users of hazardous materials?

Where and how much hazardous material is stored on our installation?

What are we doing to reduce the amount of hazardous material on our installation?

Do we have a RCRA Part B Permit or is a RCRA Part B Permit application pending approval? Do we need one?

Do we have a corrective action requirement to fulfill under the RCRA Part B Permit?

How many Solid Waste Management Units (SWMUs) are included in the corrective action requirement?

How are corrective actions being funded?

What issues do you have with our tenant organizations?

Pollution Prevention Program

What is the status of our pollution prevention program?

What are our pollution prevention goals?

What are we doing to attain these goals?

Has hazardous waste disposal increased or decreased over the last few years? Why?

Has hazardous material use increased or decreased over the last few years? Why?

When was the installation Pollution Prevention Plan last revised?

Conservation Program

Do we have a current Integrated Cultural Resources Management Plan (ICRMP)?

How are natural and cultural resources issues considered and addressed by military, civilian, and contract personnel? How are these issues integrated into land use activities?

What is our compliance status with laws governing cultural and natural resources management?

What is our Endangered Species Act compliance status? Clean Water Act Section 404 (Wetlands) compliance status? Sikes Act compliance status?

With which Native American tribes does the installation have government-to-government relationships?

What cooperative agreements do we have? Which ones have been implemented?

What is the status of the installation's relationships with local private and public landowners? Are we using partnership opportunities effectively? How are we coordinating operations of mutual concern, such as wildfire or flood control?

Is our Integrated Natural Resources Management Plan (INRMP) up to date? Is our INRMP approved?

Have we completed all applicable natural and cultural resources planning level surveys?

Do we have a current Endangered Species Management Plan for all threatened and endangered species?

Are there mission conflicts with endangered species? Archeological sites?

Are our hunting, fishing, forestry, and agricultural outleasing programs compatible with our mission?

Is there coordination with the Fish and Wildlife Service?

What natural and cultural resource management staff do we have supporting military operations? Is this adequate? Why?

Do we have an Integrated Training Area Management (ITAM) program? How are you involved in the ITAM planning and execution process?

Which of our primary missions and training activities affect natural and cultural resources management?

How do we determine which mission and training requirements affect our natural and cultural resources management procedures?

What natural and cultural resources management information do you routinely provide the Directorate of Plans, Training and Mobilization (DPTM) range operations?

Do we have any agricultural leases?

Could pollution be migrating on or off these sites? Is there a possibility of environmental contamination on these parcels? Is there a plan for resolving such conflicts?

Do we have soil erosion or sediment non-point pollution problems? Do we have an Erosion Control Plan?

Environmental Restoration

Is our installation on the National Priorities List (NPL) or the Federal Facilities Docket (FFD)?

How many sites on the installation are being addressed under the Installation Restoration Program (IRP)?

What is the status of these sites?

Are there any off-post contamination concerns at the installation?

Have we completed the Preliminary Assessment/Site Inspection (PA/SI)?

Is a Remedial Investigation/Feasibility Study (RI/FS) under way?

Do we have a Federal Facilities Agreement?

What level of community relations activities involve the installation's restoration program? Is there community interest in establishing a Restoration Advisory Board (RAB)? Have we established a RAB?

Does the Cost-to-Complete (CTC) estimate reflect all planned restoration activities at the installation?

Is the Installation Action Plan (IAP) or Base Realignment and Closure (BRAC) Cleanup Plan abstract up-to-date? Does it reflect the current status of the Defense Sites Environmental Restoration Tracking System (DSERTS) database, the CTC estimates by site and the schedule for all restoration activities for the installation?

Have Relative Risk Site Evaluations (RRSE) been determined for all of our required sites? Does the installation have any "not evaluated" sites? What is the planned funding for "not evaluated" sites?

What is the current completion date for all restoration activities at the installation?

How many sites do we have being addressed and funded under the Defense Environmental Restoration Program (DERP)? What is their status?

Have we established a Technical Review Committee?

Does appropriate coordination and cooperation occur between the installation, federal, state and local regulatory authorities?

Are there any significant problems for the installation caused by the Army's execution strategy and funding shortfalls? Have regulatory agreement schedules been renegotiated to compensate for the execution strategy and funding shortfalls?

For BRAC installations only:

Does appropriate coordination occur between the BRAC Environmental Coordinator (BEC), the Base Transition Coordinator (BTC) and the Local Reuse Authority (LRA)?

Other Programs

Drinking Water

Are we in compliance with the Safe Drinking Water Act?

Do we provide drinking water to anyone off-post?

Recycling

Do we have any cooperative programs with other organizations (doing resource recovery or recycling)?

Do we have an installation recycling program?

Air Emissions and Air Quality

Do we have any air pollution control permits?

Do we have a current emissions inventory?

What is our local air-quality attainment status?

What is our policy on the use of CFCs and halons?

Do we have a requirement for clean-fuel vehicles? Transportation control plans?

Do we collect daily paint usage records?

Do we collect daily boiler fuel dispenses, or fuel used at boilers?

Wastewater

Do we have any wastewater discharge permits? What is their status?

Do we meet our permit discharge limitations?

Hazardous Substance Spills

Do we have a current, approved Installation Spill Contingency Plan (ISCP)?

Do we have a current Spill Prevention, Control and Countermeasures Plan (SPCCP)?

Do the ISCP and the SPCCP include tenant activities?

Have the ISCP and the SPCCP been reviewed by a registered engineer?

When was the ISCP last tested?

What deficiencies were noted during the test?

What is the status of corrective actions?

How many reportable spills have we had the past year?

Were all spills reported properly?

Who is our representative to the Local Emergency Planning Committee (LEPC)?

Underground Storage Tanks (USTs)

How many USTs do we have?

Have they all been tested?

How many tanks are leaking?

What is the status of corrective actions for leaking tanks?

Have we budgeted funds for testing and removing tanks and possible cleanups?

Noise Management

Do we have any environmental noise problems?

Do we have an Installation Noise Management Program (INMP) contour map for environmental noise we generate?

Solid Waste

Do we have landfills?

Do we have proper operating permits for our landfills?

What are we doing to reduce solid waste?

Environmental Training

Have our people been properly trained to do their jobs?

Do we have an environmental awareness training program?

Has all training required by law or Army regulation been completed? Have records been retained?

How many people need training?

Asbestos, Radon and Lead Hazards

Have all of our buildings been inspected for asbestos?

Do any buildings require abatement?

Is there an Asbestos Management Plan?

How many buildings have been tested for radon? For lead hazards?

Do any require remediation?

Questions for Your Environmental Coordinator (at OCONUS Installations)

What are our unique environmental policies?

What programs do we have that parallel _____ program(s)?

Questions for Your Public Affairs Officer

Do local communities know that our installation has an environmental program? How is our environmental program perceived in the community?

What installation environmental issues are important to local community organizations or groups?

How do we inform and interact with the community?

What types of communication tools are being used to inform the public about our environmental program?

What is the Public Affairs Office (PAO) doing to increase our work force's environmental awareness?

Does the in-briefing for new employees cover environmental programs?

What is our relationship with local officials regarding environmental issues?
How is our relationship with the congressional delegation?

What is our relationship with the media on environmental issues?

What organized environmental groups are interested in our installation?
What is our relationship with them?

Have local communities identified any common concerns about our installation cleanup program?
How does the PAO release information addressing those concerns?

What environmental "good news" stories can we release to local newspapers or TV stations?

Do we have a Restoration Advisory Board (RAB)? How often does it meet? What are the key issues addressed by the RAB? How do the RAB members work with each other? How are disputes resolved?

(If the installation has not formed a RAB): Have we surveyed and documented community interest in forming a RAB? How did we publicize that we are seeking community interest in a RAB?

Do we have a public involvement and response plan for our DERP projects? Is it being implemented?

Questions for Your Legal Office

Does the office coordinate with key environmental personnel to ensure timely coordination of environmental issues?

Do we have any Notices of Violation (NOVs)? What is the status of each? Are any other Army agencies assisting us in resolving them? Are we operating under any compliance order or consent decree?

Who is our Environmental Law Specialist (ELS)? What training and experience does he or she have in environmental law? What training and experience does he or she have in _____ (fill in local environmental issue) laws?

How is the ELS actively involved in the planning, execution, and monitoring of our environmental programs?

Has the ELS consulted formally with the U.S. Fish and Wildlife Service regarding endangered species?

Has the ELS been involved in the preparation of Endangered Species Management Plans?

How is the ELS involved in integrating environmental protection and preservation activities into the planning and execution of our mission?

Does the ELS review our environmental permits for appropriateness of standards and environmental fees and taxes?

Does the ELS review all command responses to local, state and federal regulators?

Does the ELS actively participate in environmental inspections and audits, and review inspection standards and inspection reports?

How does the ELS participate in the Environmental Compliance Assessment System (ECAS)? What does the ELS do when regulators inspect our compliance posture? Does the ELS review responses to regulators, participate in negotiations, and review NEPA documents before publication?

Questions for Your Safety Office

Are we using the Hazardous Substance Management System (HSMS) to comply with Occupational Safety and Health Administration (OSHA) and Hazard Communication (HAZCOMM) regulations?

Has everyone received the required OSHA training? How are the HAZCOMM and other OSHA programs coordinated with the environmental plans and programs for hazardous waste?

Are accident prevention controls in place in operations that may threaten or damage the environment if an accident occurred?

Are we following Army regulations to protect the environment from the effects of ammunition, explosives, or chemical agent contamination of real property?

Questions for Your Directorate of Plans, Training and Mobilization (DPTM)

How do training activities meet National Environmental Policy Act (NEPA) compliance requirements? How do activities get "cleared" through a Record of Environmental Consideration (REC) under AR 200-2? How do we address activities requiring an Environmental Assessment (EA)? Have any major range projects or mission changes required an Environmental Impact Statement (EIS)?

Do we have an Integrated Training Area Management (ITAM) program? How is it staffed? How are natural resources management and range operations involved in the ITAM program?

What can the installation do to sustain training lands through the ITAM program?

How do we manage ITAM dollars?

What were the installation requirements in the last ITAM Work Plan to MACOM headquarters?

What is the process for approving the ITAM Work Plans and expenditure of ITAM funds?

What is our current funding for the ITAM program compared to the installation's requirements?

Show me the last Installation Status Report comments for the ITAM program and training facilities.

Have you developed the Training Requirements Integration (TRI) component of ITAM by linking the Range Facility Management Schedule System with the installation's Geographic Information System (GIS)? Do installation trainers have the opportunity to obtain GIS products for planning unit or school training?

Explain the ITAM Environmental Awareness plan for the installation.

How does the installation prioritize and execute Land Rehabilitation and Maintenance (LRAM) projects?

What percentage of available ITAM funds are spent on LRAM projects?

Questions for the Preventive Medicine Activity

Do Preventive Medicine (PVNTMED) Activity personnel need environmental training? Do environmental personnel need preventive health or health education training?

Do we use the Hazardous Substance Management System (HSMS) to maintain records of hazardous materials being used by activities, as well as the training and equipment required for personnel using these hazardous materials?

Do the PVNTMED Services and DPW/DSHE personnel meet regularly?

Do preventive medicine and veterinary health technicians routinely inspect warehouses and other food storage sites for proper sanitation and evidence of insects, rodents and other pests?

Do pesticide and other treatments for medically important pests (including cockroaches in food-handling areas) follow your recommendations?

Are all pesticide applicators and other installation personnel who are routinely exposed to pesticides enrolled in medical surveillance, health education and respiratory protection (occupational health) programs?

Do we have a medical monitoring program? How is regulatory-mandated medical monitoring, record keeping and reporting coordinated?

Are installation personnel experiencing any work-related health problems?

What is the PVNTMED involvement in the Technical Review Committee?

Are we in compliance with the medical requirements of Title 29 CFR Part 1910.120?

Questions for Your Natural Resources Manager

How do our reimbursable programs (such as forestry, agriculture and grazing) enhance mission opportunities and ecosystem management? How do they improve biodiversity?

Have we made efforts to reduce the intensity and cost of grounds maintenance?

What are we doing in the way of environmental and economically beneficial landscaping practices?

Do we have any agricultural leases?

Could pollution be migrating onto these sites?

Could these parcels contain contamination?

Could pollution be moving off these sites?

Do we have soil erosion or sediment non-point pollution problems?

Do we have an Erosion Control Plan?

Do we have any property proposed for leasing? For excessing?

Who certifies the condition of that land before it is excessed?

Do any missions conflict with endangered species?

Is there a signed, current cooperative agreement? Has it been implemented?

Do we coordinate with the Fish and Wildlife Service?

Do any missions conflict with natural resources requirements?

Do we have an Integrated Training Area Management (ITAM) program?

Questions for Your Cultural Resources Manager

How do you coordinate with other staff elements and tenants to plan for projects and activities that may affect cultural resources?

Do we have a current Integrated Cultural Resources Management Plan (ICRMP)? Is it on schedule and adequately funded? Have planning level surveys for cultural resources been completed?

Are cultural resources included in Integrated Natural Resources Management Plans and the Integrated Training Area Management (ITAM) program?

Is cultural resource management (including Native American issues) coordinated with installation training and testing activities, master planning, and natural resource and endangered species management planning and programming?

Who are the staff Cultural Resources Manager and Coordinator for Native American Affairs? What are his or her (or their) qualifications?

With which Native American tribes has the installation established a relationship?

What is the installation's history with specific Native American tribal governments?

What consultation procedures has the installation developed to address inadvertent discoveries of cultural items outlined in the Native American Graves Protection and Repatriation Act (NAGPRA)? Have NAGPRA Comprehensive Agreements been executed with appropriate tribes?

Are Native American sacred sites present? If so, how do we protect Native American rights of access to sacred sites, and maintain confidentiality of site locations?

When can I meet with tribal government heads, and what protocols should I know when I do?

Do we have a National Historic Preservation Act (NHPA) Section 106 Programmatic Agreement with the State Historic Preservation Office (SHPO) and Advisory Council on Historic Preservation? Is it being implemented?

Are historic buildings and structures maintained and repaired according to the NHPA and the Interior Secretary's Standards for Rehabilitation? Have maintenance and repair guidelines been incorporated into our Section 106 Programmatic Agreement?

Are the installation's military police, legal, public affairs, and fish, game and recreation management staffs familiar with the requirements of the Archeological Resources Protection Act (ARPA)? Have they been adequately trained to fulfill their roles in detecting and reporting ARPA violations?

Are archeological collections and associated records maintained according to standards defined in Title 36 CFR Section 79? Does the installation maintain a curation facility or does it use another institution's repository?

Questions for DPW on Pest Management

Do we have a current, approved Integrated Pest Management Plan? Does it formally address weed control and other pest management programs?

Who is the installation pest management coordinator? What are his or her qualifications?

Does your pest management coordinator help you to meet DoD and other regulatory pesticide use, record-keeping and pest management personnel training requirements?

Are restricted-use pesticide applicators properly trained and certified every three years?

Are contracts for commercial pest control (if any) written and enforced by personnel trained to DoD standards? Do the contracts meet DoD pesticide reduction and reporting requirements?

How are pesticide-related preventive medicine requirements (such as those in AR 40-5) addressed for military and civilian personnel?

Are pesticide treatments for medically important pests justified by surveillance program or by some standard frequency?

What pesticide storage issues have you discovered? Are pesticides properly stored and applied? Are we performing the required health and safety inspections of our pesticide storage facilities?

Are we in compliance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)? Is weed control in compliance with Noxious Weed Act?

Will our pest management meet federal pollution prevention guidelines for a 50-percent reduction in pesticide releases by the end of fiscal year 2000?

Questions for Your Director of Logistics

What programs do we have for hazardous material procurement and inventory control?

Have we established a Hazardous Material Control Center? What are our plans for a "pharmacy" system?

Are we implementing the Hazardous Substance Management System (HSMS)? How do we control and reduce our inventory of hazardous materials?

How do we identify and account for hazardous materials purchased locally?

Do we have adequate storage facilities for hazardous materials?

Are warning signs and labels posted and Material Safety Data Sheets (MSDS) available?

Do we have proper safety materials, protective clothing, and equipment on hand for emergency cleanup, treatment, and decontamination, if needed?

How do you address hazardous waste requirement issues? Are any issues specifically related to Defense Reutilization and Marketing Office (DRMO) performance?

Questions for Other Staff Elements

For the Director of Personnel and Community Activities

Are your activities in compliance with the Clean Air Act (such as in the auto craft shop or ceramics lab); lead hazard rules (at skeet and trap ranges); and FIFRA (with herbicides and pesticides on the golf course)?

For Director of Information Management

How are we recycling or disposing of copier and laser printer toner cartridges?

Are we using recycled paper?

Are we using digital or other photo processing methods that don't require chemicals?

For the AAFES Manager

How do you manage and dispose of waste oil and solvents from the AAFES garage?

How do you manage and dispose of herbicides and pesticides from the garden centers?

What recycling systems are in place at the "self-help" centers?

Commanders' Questions for Units

Brigade, battalion and company commanders may want to ask the following questions when touring their units:

Do you have hazardous waste and spill response annexes in your garrison or motor pool SOP and field TSOP?

Who is your unit environmental compliance officer?

(To company commander:) Do you incorporate the principle of TC 5-400 into training management and preparations for training?

What natural or cultural resources issues affect your field training operations? How does your unit address them?

Do units use drip pans when vehicles stop for extended periods in training areas?

Are all barrels in motor pools properly labeled?

Do units use overflow pans during refueling operations in the field?

Are soldiers aware of areas off-limits to training? Are these areas properly marked?

Do soldiers have environmental field cards? Are they aware of the contents of the card?

Do leaders have copies of the installation leaders' handbook or field cards on the environment? Do they use them to prepare for field training?

Are environmental awareness briefings conducted prior to field training?

Do any environmental regulations preclude you from training to standard? If so, how are we overcoming this training deficiency?

What is the condition of the training area? Is it supporting our training mission? If not, what areas need improvement and have we informed the installation Integrated Training Area Management (ITAM) coordinator?

How are environmental restrictions and rules in the training area disseminated to you so that you can inform subordinate units and plan training?

Do ITAM Environmental Awareness (EA) products effectively relay training-related environmental information to leaders and soldiers?

Have you had an opportunity to contribute to ITAM Land Rehabilitation and Maintenance (LRAM) project development to improve the natural condition of the training? If so, how?

Questions to ask unit environmental compliance officers:

Are most natural resources issues faced by our units directly or indirectly related to compliance with federal laws, such as the Endangered Species Act?

How has compliance with environmental laws impacted our mission capability?

Do you receive adequate support from the installation natural resources management staff?

▪ Appendix B ▪

My Environmental Management Team

Environmental Quality Control Committee

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_____
_____
_____
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_____
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_____
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_____
_____
_____
_____
_____
_____

Environmental Coordinator

Name: _____
Phone: _____

Legal Advisor

Name: _____
Phone: _____

Public Affairs Officer

Name: _____
Phone: _____

Preventive Medicine Officer

Name: _____
Phone: _____

Land Manager

Name: _____
Phone: _____

Natural Resources Manager

Name: _____
Phone: _____

Cultural Resources Manager

Name: _____
Phone: _____

Remedial Project Manager

Name: _____
Phone: _____

Safety Officer

Name: _____
Phone: _____

Director of Logistics

Name: _____
Phone: _____

Director of Public Works

Name: _____
Phone: _____

Pest Management Coordinator

Name: _____
Phone: _____

Regional Environmental Office/Coordinator

Name: _____
Phone: _____

EPA Federal Facilities Coordinator

Name: _____
Phone: _____

State Environmental Agency Representative

Name: _____
Phone: _____

Support Agency Representatives

Office of the Director of Environmental Programs

Name: _____

Phone: _____

U.S. Army Center for Health Promotion and Preventive Medicine

Name: _____

Phone: _____

U.S. Army Center for Public Works

Name: _____

Phone: _____

U.S. Army Environmental Center

Name: _____

Phone: _____

U.S. Fish and Wildlife Regional Office

Name: _____

Phone: _____

State Natural Resources Office

Name: _____

Phone: _____

U.S. Army Corps of Engineers District

Name: _____

Phone: _____

Technical Review Committee

Name: _____

Phone: _____

Name: _____

Phone: _____

Name: _____

Phone: _____

Name: _____

Phone: _____